USER MANUAL

【Digital Video Recorder】

★ DVR ★ HVR ★ NVR

★ Please read the user manual before using this product ,and follow the instruction to operate the product correctly.
★ Please keep the user instruction for future reference.

Preface

Thanks for choosing our products, and we will provide the best products and service for you.

This instruction is suitable for many series of digital video recorder of our company. This instruction takes embedded digital video recorder of HD intelligent 98 series operating instruction as an example, the configuration of different model may have little difference. Please adhere to the actual product instead.

This manual is just for reference, the contents of this manual will be updated according to function enhancement of products. Updated contents will be added in new instruction book, and you can download it on our website.

Your timely suggestion and feedback will be appreciated, there may be some mistakes in the instruction book, such as mistaken technical specifications, product function, unmatched operation, or wrong printing. , we will improve it in the future.

Features

Basic function

- Embedded Linux OS;
- Standard H.264 compression;
- 4/8/16/24 Ch. video input;
- Support 8/4 Ch. 720P or 4/2 Ch 1080P HD IPC input；
- Support 1 Ch VGA video output, CVBS, 16 Ch loop-out simultaneously, support HDMI,VGA,CVBS,SPOT output.
- Support 4/8/16 Ch andio input. 1 Ch audio output.
- Support RS-485 interface,can control PTZ, extend a variety of decoding protocols
- RS-232 interface, equipment upgraded and extended application
- Support 16 Ch record playback simultaneously；
- Support audio intercom.
- Built-in WEB Server,convenient to remote controlling management.
- Support mobile phone viewer (Windows Mobile/Symbian/iPhone/ Android/BlackBerry)
- Support multiple DDNS (Oray, 3322, DynDNS)；
- support TB HDD；
- H.264 compression algorithm, flexible for network transmission
- 4/8/16/24 channels video input
- RS232 interface support keyboard control, series port connection and upgrade, matrix control, etc
- RS-485 interface support PTZ and comparable for all protocols
- Multi-level user management

Compression

- H.264 video compression algorithm, independent hardware compression of real time 25fps CIF D1 resolution. Some models can be independent hardware compression of real time 25fps CIF resolution.
- Support dynamic bit rate, dynamic frame rate, the video image quality can be set while the compressed video image stream be limited.
- Support 4 channels / 8 channels / 16 channels/24 channels video & audio signal, real-time compression for video & audio signal of each channel, synchronized video and audio
- Resolution 1080P（1920*1080）、720P（1280*720）、D1（704*576）、CIF（352*288）、QCIF（176*144）video resolution
- Support OSD, date and time can be set as you want, Support multi zones to be

masked.

Storage backup

- Built-in 1 / 2 / 4 /8SATA interface, Support TB HDD (1TB = 1000GB) for each interface.
- Backup from USB interface (USB Disk, mobile hard disk etc.)
- The files in HDD can be downloaded through network.
- Non-working HDD hibernation for reducing the working temperature and power consumption.
- Looping record and non-looping record can be included.
- Special video file format, prevent malice tampering and overwritten

Network

- Support a 10M/100M/1000M compatible Ethernet interface.
- Web setting to preview video and audio signal and check DVR status,
- Network PTZ controlling and setting the camera’s parameter: iris, zoom, etc.
- Remote alarm and system log enquiry.
- Record file enquiry and real-time playback mode
- Multi-level user management and administrator authorization, Set up the permissions of users and different user groups.
- Networking method: PSTN、ISDN、ADSL、DDNS、LAN、WEB, etc.
- Network real-time multi channel playback simultaneously

Video Playback

- Real-time recording for every channel, support 16 Ch. synchronous playback

- Search the playback recorded files on DVR through network;
- Multiple recording mode: manual, normal, alarm trigger, motion detection, and pre -recording
- Live video search and record video search
- Playback mode: slow play, fast play, backward play and frame play
- Any part of image can be chosen to be magnified while full-screen playback of single screen.
- The files in the DVR can be checked through network while playback.

Real-time Monitoring

- Support PAL / NTSC
- High definition, clear video, live display
- On-display video channel status information: recording, motion detection, video loss,

video freeze etc.

- Video split and channel looping display
- Video adjustment: hue, contrast, saturation, brightness
- On-display character overlay: camera name and location, time and date
- Analog video output and VGA output, support monitor and TV display
- On-display bit rate and recording occupied hard disk storage (MB/h).
- Local, remote system log can be checked.

Audio

- 1 / 4 / 8 /16channels audio input, 1 channel audio output.
- Synchronized video & audio input,clear and fluent audio quality,no noise.
- Synchronized monitering image and remote audio monitering.
- Two-way audio (Support BNC interface and 3.`5mm interface)
- Synchronized video & audio recording storage for every channel
- Synchronized video & audio playback

Alarm

- 4/8/16 Ch. Alarm in,1/2/4Ch. relay output.
- Support IR sensor, smoke detector and other alarm devices
- Intelligent features: tracking, perimeter control, intrusion, retrograde, pacing, suspicious object, missing object and camera tampering.
- Alarm linkage mode, alarm trigger start to recording and invoke flash light, bell or other alarm devices
- Pre-recording mode: pre-recording before alarm trigger started.pre-recording time can be set.
- Motion detection can be set in any camera. Decide whether to activate alarm and flashing light or other alarm devices according to whether there is moving or changes of objects in the motion detection areas.
- Multi channel alarm reply output, easy to implement all the alarm applications
- Protection Circuit on alarm input and output

Intelligent Features

- Support front panel, remote control and mouse operation mode.
- Any local part of image can be magnified while playback,support mouse to control PTZ.
- Fast & convenience shortcut operation: copy & paste for same settings

Contents

1 Introduction

1.1 Purpose

This user manual is provided mainly for the project managers, sales personnel, end users, engineering installers and other related personnel, facilitating the installation and maintenance and improving the work efficiency.

1.2 Scope

- Usage of the user manual: project managers, project installers, maintenance personel and end users, etc.
- Content of the user manual: introduction and instructions of the features, parameters of embedded DVRs
- Models of DVRs in this user manual: We series of embedded DVRs

1.3 Reference

- GA/T367-2001 Technical requirements for video security monitoring system；
- GA/T368-2001 Technical requirements for intrusion alarm system；
- GB8898-2001 Safety requirements of audio, video and similar electronic equipment.

2 Instructions

2.1Hardware Environment

- Power: 100V ~ 240V AC, UPS or voltage stabilizer for better power input
- Cables: Cat 5 network cable, AV cable, audio cable, 485 control cable
- Temperature: 0°C—55°C, too heat or freeze will cause the malfunction of DVR,

strictly prohibit to install the DVR above the heat source

- Humidity: 10%--90%, keep the DVR away from rain or wet place, installation must stay away from water source
- Ventilation: install the DVR in an airy place, keep away from dusty
- Installation: horizon installation or cabinet installation, protective casing needed when outdoor installation

2.2Softeware Environment

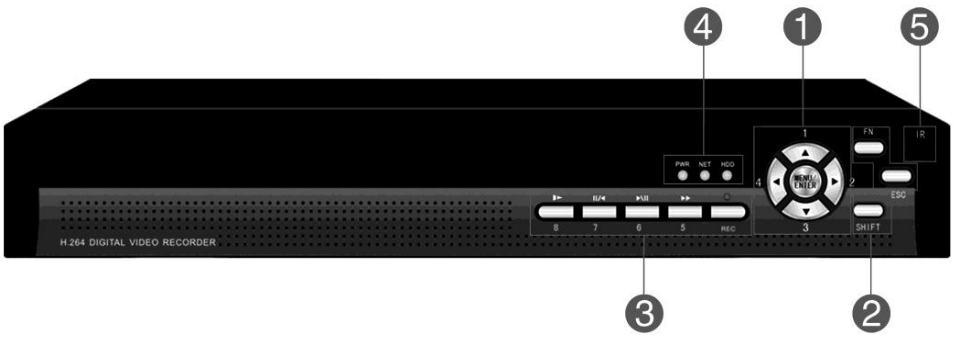
- OS: embedded Linux system
- Device firmware: Universal version (Please check We website for latest version)

2.3Network

- Protocols: TCP/IP、HTTP、DNS、DHCP、ARP、RARP etc.

2.4Front Panel

2.4.1 Front Panel of 98 Series

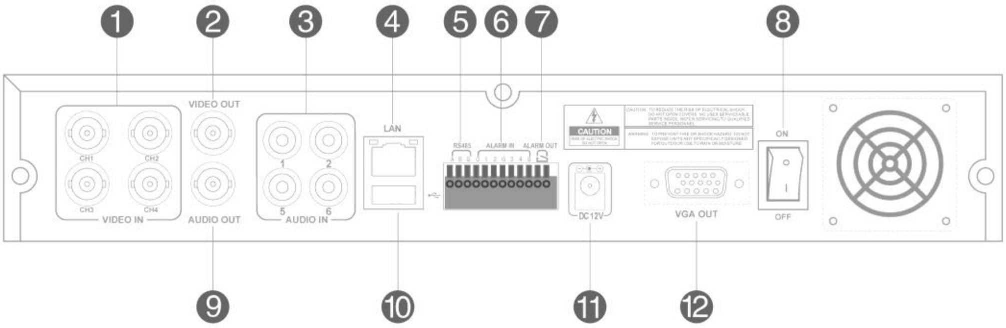


Front Panel Diagram of 98 2U model

S/N	Key pad name	Icon	Main function
1	Up & down	▲ ▼	Activate current control, modify setup, increase/decrease
			Increase/decrease numeral, assistant function such as PTZ

			▲Num Pad (1)　▼Num/Letter Pad (3/def)
	Right & left	▶ ◀	Shift current activated control. When playback
			PTZ control
			▶ Num/Letter Pad (2/abc)　◀ Num/Letter Pad (4/ghi)
	Enter	↵	Confirm operation
			Open the system menu when in preview
2	shift	shift	Switch between function and numeral
3	Slow Play	▮▸	Multiple slow play speeds or normal playback
			Zoom-
			Number/Letter 8/tuv
	Play Previous	⏮	In playback mode, playback the previous video
			Focus-
			Number/Letter 7/pqrs
	Play Next	⏭	In playback mode, playback the next video
			Focus+
			Number/Letter 6/mno
	Fast play	⏩	Various fast speeds and normal playback.
			Zoom+
			Number/Letter 5/jkl
	Recording	REC	Manually stop/start recording
			PTZ enter to the setting page.
4	indicator Light	POW	Power light
			Net light
		NET	Record light
5	Remote	IR	Receive remote control signal

2.4.2 Black Board of 98 Seri



S/N	Function	S/N	Function
1	4 Channel Video Output	7	1 Channel Alarm Output
2	1 Channel Audio Input	8	Power button
3	4 Channel Audio Input	9	1 Channel Audio Input
4	RJ45	10	USB OTG 2.0 interface(Only for USB storage device)
5	RS485 port	11	DC 12V
6	4chanel alarm input	12	VGA Output

2.5Mouse

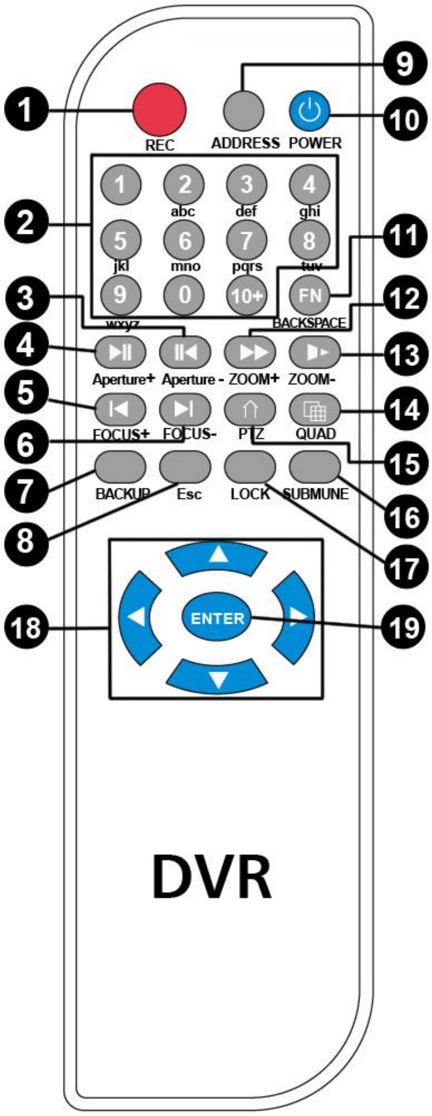
⁎ For right-hand mouse

The DVR could be operated by mouse, connect the USB mouse into the USB port in front panel

Left click mouse	System pops up password input dialogue box if you have not logged in. In real-time monitor mode, you can go to the main menu.
	When you have selected one menu item, left click mouse to view menu content.
	Implement the control operation.
	Modify checkbox or motion detection status.
	Click combo box to pop up drop down list.

	In input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalized). Here ← stands for backspace button. __ stands for space button. In English input mode: _stands for input a backspace icon and ← stands for deleting the previous character. In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral. When input special sign, you can click corresponding numeral in the front panel to input. For example, click numeral 1 you can input"/" , or you can click the numeral in the on-screen keyboard directly. 
Double left click mouse	Implement special control operation such as double click one item in the file list to playback the video.
	In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.
Right click mouse	In real-time monitor mode, pops up shortcut menu: one-window, four-window, nine-window and sixteen-window, Pan/Tilt/Zoom, color setting, search, record, alarm input, alarm output, main menu. Among which, Pan/Tilt/Zoom and color setting applies for current selected channel. If you are in multiple-window mode, system automatically switches to the corresponding channel.
	Exit current menu without saving the modification.
Press middle button	In numeral input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

2.6 A Common Remote Controller

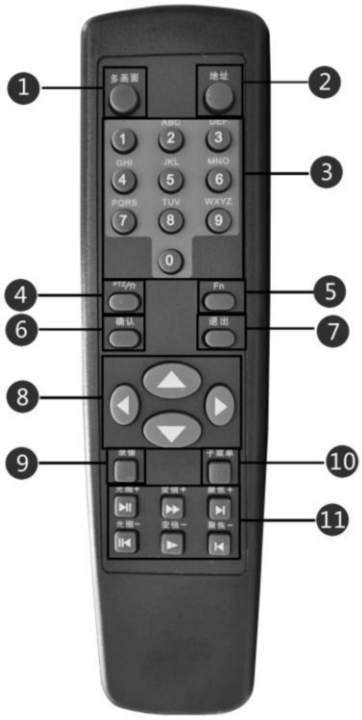


Remote Control Keys

S/N	Name	Icon	Function
1	Recording	REC	Manually stop/start recording
2	Numeral keys 0-9	0-9	Input password, switch channel and input numeral.
3	Play/Pause	▶‖	Playback or paused mode, click this button to realize
			Iris +
4	Reverse/Pause	‖◀	In normal playback or pause mode, click this button to reverse
			Iris -
5	Play previous	|◀	In playback mode, playback the previous video
			Focus -

6	Play next	▶❘	In playback mode, playback the next video
			Focus +
7	Backup	BACKUP	Into the backup interface, start backup operating
8	ESC	ESC	Close upper interface or controls
9	Add	ID	Enter DVR No. setting *999 for Administrator *DVR No. setting: Main Menu->Setting->General: DVR number
10	Turn off	⏻	Turn off button
11	Assistant	Fn	Support Multi-function: Shift PTZ control manual, Delete the previous character, Realize special functions
12	Fast play	▶▶	Various fast speeds and normal playback
			Zoom +
13	Slow play	▶ ▸	Multiple slow play speeds or normal playback
			Zoom -
14	Screen mode	Screen mode	Preview switch video interface to 1/4/8/16 screen modes
15	PTZ	PTZ	In PTZ function: enable PTZ
	Shift	⇧	Click this button to switch between numeral, English (Small/Capitalized), Chinese
16	Shortcut Menu	Sub Menu	pops up shortcut menu
17	LOCK	LOCK	Log off current user
18	Up/down	▲ ▼	Activate current control, modify setup
			Increase/decrease numeral, assistant function such as PTZ menu.
	Left/right	◀ ▶	Shift current activated control
			When playback, click these buttons to control playback bar, PTZ control.
19	Enter	Enter	Confirm operation
			Go to the main menu

B Comfortabel Remote Controller



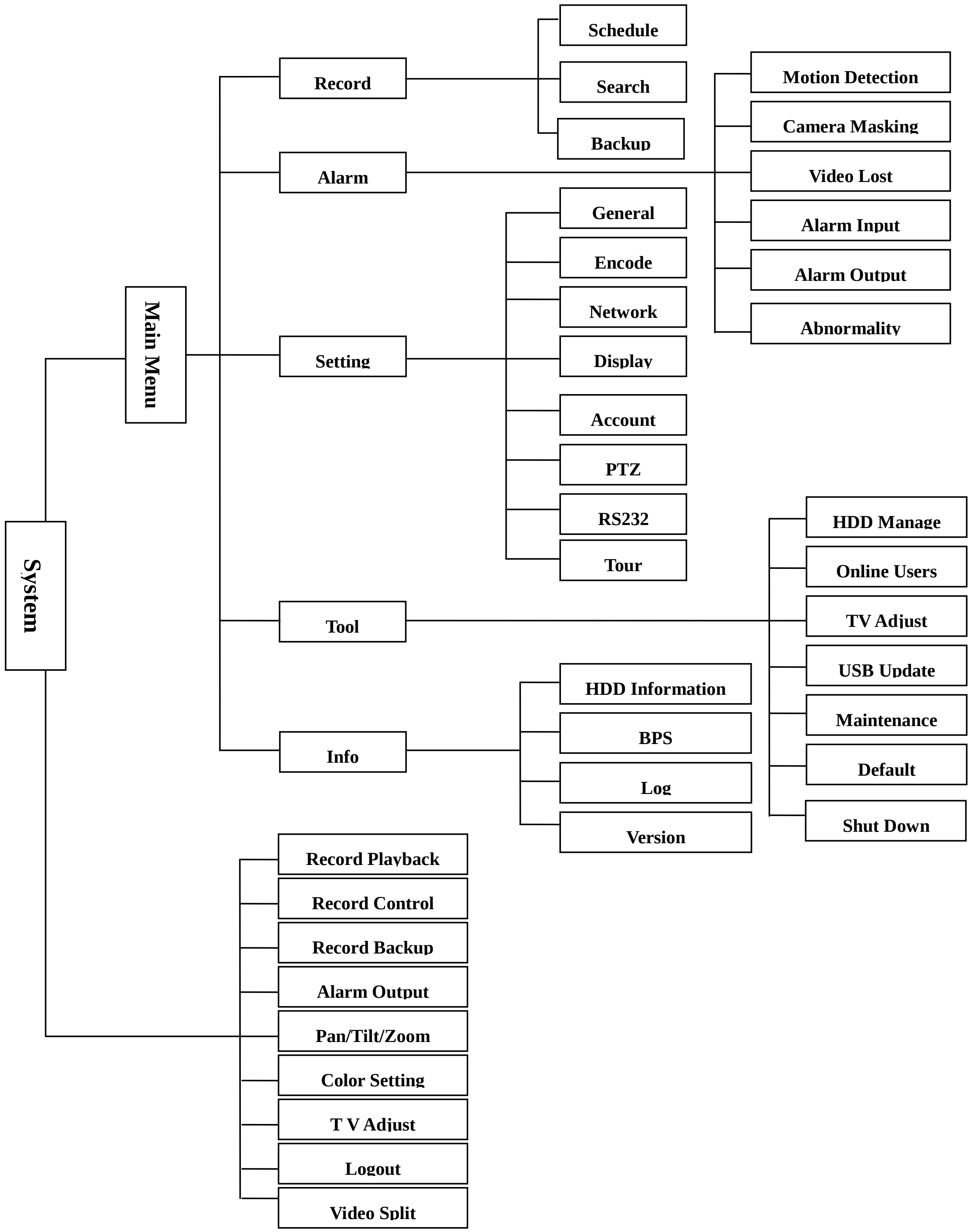
Remote Control Keys

S/N	Name	Icon	Function
1	**Window switch**		Switch between one-window and multiple-window display modes.
2	**Add**	**ID**	Enter DVR No. setting **999 for Administrator* **DVR No. setting:* Main Menu->Setting->General: DVR number
3	**Numeral keys 0-9**	**0-9**	Input password, switch channel and input numeral.
4	**PTZ**	**PTZ**	In PTZ function: enable PTZ
	Shift		Click this button to switch between numeral, English (Small/Capitalized), Chinese
5	**Assistant**	**Fn**	Support Multi-function: Shift PTZ control manual, Delete the previous character, Realize special functions
6	**Enter**	**Enter**	Confirm operation
			Go to the main menu
7	**ESC**	**ESC**	Close upper interface or controls
8	**Up/down**	▲▼	Activate current control, modify setup,
			Increase/decrease numeral, assistant function such as PTZ menu.
	Left/right	◀▶	Shift current activated control
			When playback, click these buttons to control playback bar, PTZ
9	**Record**	**Record**	Manually stop/start recording, working with direction keys
			In PTZ function: PTZ setting
10	**Shortcut Menu**	**Sub Menu**	pops up shortcut menu

11	**Play/Pause**		Playback or paused mode, click this button to realize
			Iris +
	Reverse/Pause		In normal playback or pause mode, click this button to reverse
			Iris -
	Fast play		Various fast speeds and normal playback
			Zoom +
	Slow play		Multiple slow play speeds or normal playback
			Zoom -
	Play previous		In playback mode, playback the previous video
			Focus -
	Play next		In playback mode, playback the next video
			Focus +

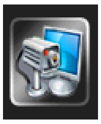
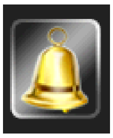
3 System Introduction

3.1 System Menu Tree

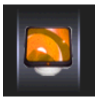


3.2 Main Menu

Recording and Alarm

Main Menu	Sub Menu	Function
Record 	**Schedule** 	Time setting for record, motion detection, external alarm. Time operated setting per day per week (Period time for record, receive external alarm signal, motion detection)
	Search 	Record enquiry and playback, sorted by video type (All, alarm, motion detection, all alarm), channels, time, the result will be displayed in file list, choose the file to play R- Regular recording file A – Alarming recoding file M – Motion detection file H—Manual
	Backup 	Record backup operation and setting
Alarm 	**Motion Detection** 	Include channel, enable/off, sensitive, detection zone, arming time, output time delay, alarm linkage, PTZ linkage, pre-recording, patrol setting etc., copy & paste for same settings
	Camera Masking 	Include channel, enable/off, sensitive, detection zone, arming time, output time delay, alarm linkage, PTZ linkage, pre-recording, patrol setting etc., copy & paste for same settings
	Video Lost 	Include channel, enable/off, arming time, output time delay, alarm linkage, PTZ linkage, pre-recording, patrol setting etc., copy & paste for same settings
	Alarm Input 	Include channel, enable/off, alarm input type, arming time, output time delay, alarm linkage, PTZ linkage, pre-recording, patrol setting etc., copy & paste for same settings
	Alarm Output 	Alarm Mode, setting, on/off and status

	Abnormity 	Abnormity setting, on/off and linkage action (Alarm output,
	Digital Alarm 	Include channel, enable/off, alarm input type, arming time, output time delay, alarm linkage, PTZ linkage, pre-recording, patrol setting etc., copy & paste for same settings

Setting 	**General** 	Setting system time, time format, language, recording in HDD, series number, video system, video output format, stand-by time, etc.
	Encode 	Setting audio & video encode mode, frame rate, quality, etc.
	Network 	Setting network address, video transmission protocols, DHCP, etc.
	Display 	Setting channel name, front output, coding output, masking, etc.
	Account 	User group and account
	PTZ 	PTZ control protocols and bit rate
	RS232 	Setting series port and bit rate
	Tour 	Setting preview, tour time, etc.

Managemnt Tools

Tool	**HDD Manage**	HDD management, delete data and etc. Note: System will restart after setting HDD
	Online Users	Online user management
	TV Adjust	Adjust picture's up, down, left, right deflate.
	USB Update	File system, U-BOOT , Kernel, Configuration, Application update,
	Maintenance	Save system configuration as a file, easy to save or load for quick setting.
	Configuration	Restart system and delete files.
	Default	Restore all to default or partially by selection Note: Not for user account
	Shut Down	User logout, system shutdown, restart, etc...
Info	**HDD Information**	SATA interface status, capacity for each HDD and total, remaining capacity, video start/stop time, etc. Type: read-write disk, read-only disk, redundancy disk etc.
	BPS	Each channel's bit rate and occupied HDD capacity per hour.

	Log 	Display important event log and designate needed log.
	Version 	Display system hardware, software version and release date, etc.

3.3 Shortcut Menu

Menu	**Record Playback**	Record video inquiry and playback
	Record Control	Set record status: schedule/manual/stop
	Record Backup	Record backup operation and setting
	Alarm Output	Alarm output setting, on/off and status
	Pan/Tilt/Zoom	PTZ control protocols and bit rate
	Color Setting	Set hue, brightness, contrast, saturation
	TV Adjust	Adjust picture’s up, down, left, right deflate.
	Logout	User logout, system shutdown
	View	1 / 4 / 8 / 16 channel display
	Mute	Buzzer off

3.4 Operation of Main Menu

Main menu includes: video function, alarm function, system setup, management tool, system information.

Note:

- All sub-menu setup will be effective by confirming “SAVE”, otherwise ineffective.

◆ When check box ■ is highlighted, it means certain function is selected. If unfilled means not selected.

Enter main menu method:

1, press ENTER button on the panel to enter main menu directly

2, press Esc button on the panel, select MAIN MENU.



3.5 Record

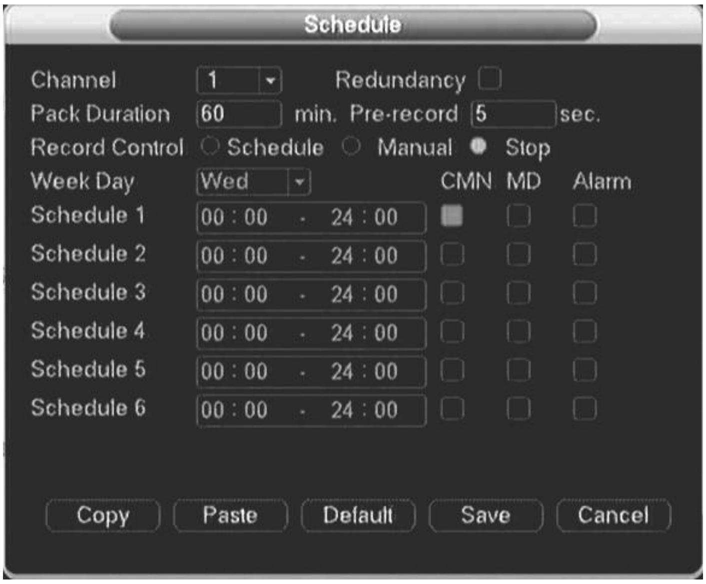
Note: User should have "Record" authority, HDD should be installed and format properly,

Setting video setup and playback function, including schedule, motion detection, and exterior alarm setting. Inquire according to video type (ALL, NORMAL, ALARM, MOTION DETECTION), channel, time. The result will be displayed in a list



3.5.1 Schedule

When the system boots up, it is in default 24-hour regular mode. You can set record type and time in schedule interface. Setting at Main menu> Video function> video setting.



Including schedule setting regarding Regular（R）, motion detection video (M), Alarm

(A) Manual (H)

Channel: Please select the channel number first. You can select “all” if you want to set for the whole channels.

Redundancy: System supports redundancy backup function. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (Main menu->Advanced->HDD Management)

Pack Duration: Choose the time slice of video file

Pre-record: record the video previously than motion detection

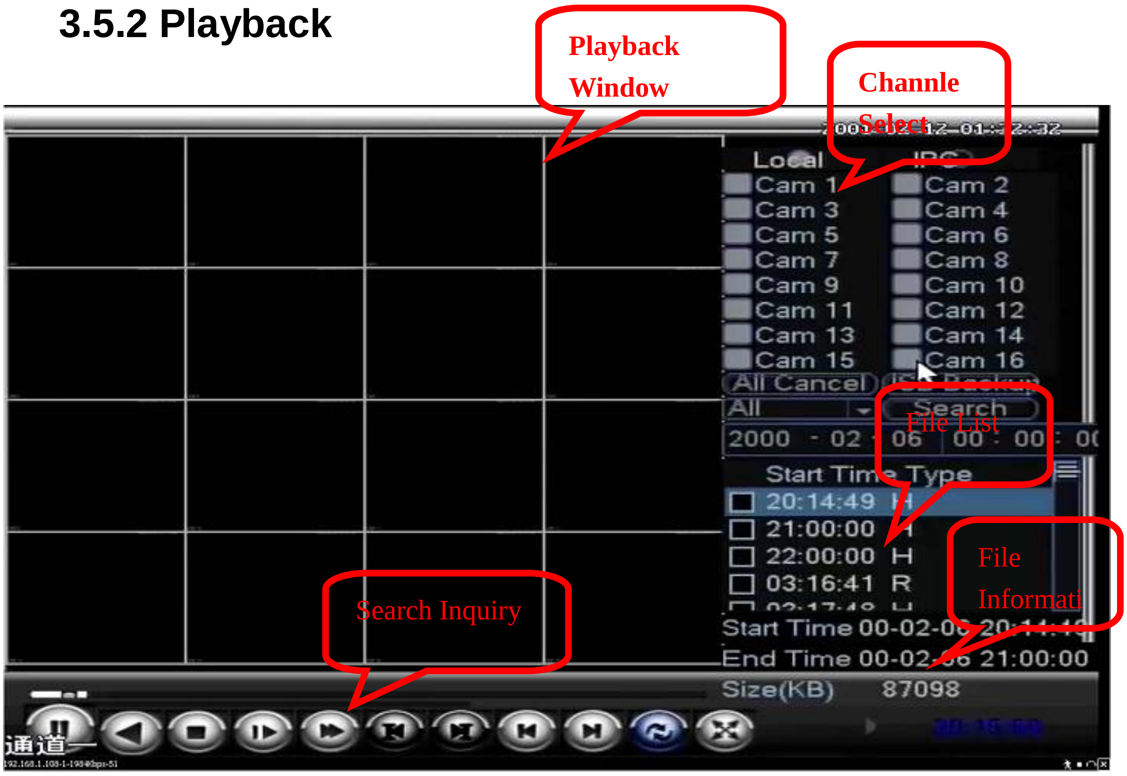
Video control: single option, "●" means selected, there are "config", "all the time", "close" 3 options.

Week day: There are eight options: ranges from Saturday to Sunday and all.

Time period: means current channel is recording in this period. "■" setting regular, motion detection, alarm, status, it can be single or multiple choices. 6 time periods to set.

Also allows you to copy one channel setup to another. After setting in channel 1, you can click paste button and turn to channel 2 and then click copy button. You can finish setting for one channel and then click save button or you can finish all setup and then click save button to memorize all the settings.

3.5.2 Playback



Video inquiry	demonstration	on-screen display
enter video playback menu	Select *video function* from main menu to enter menu page Notet: The password may needed when user logout.	
Video playback operation	According to video type: all, alarm, motion detection, all alarm video, channel, time etc., you can inquire video file based on multiple conditions. The result is displayed as a list. The screen list shows128 video files, you can press ◀ 、 ▶ keys to up/down check video file or drag mouse to check. Select the file name and double click mouse (or click enter button), you can view file content. Note: file type model: R-Regular, MD-Motion detection, A-Alarm.H—Manual Selecting single video playback or multiple video playbacks, select channel 1 or channel 2 to playback. Selecting 2 channel playback means 2 window's video files playback at the same time.	

Playback operation	Playback video (screen displays channel, date, time, play speed, play progress), control speed, replay (automatically replay video file according to inquiry result), full screen display ect. Note: The status bar will be hidden automaticlly when full screen display, move mouse to display again. 
Channels switch when playback	When video playback, press number button to switch playback channel
Partial zoom	Right click mouse to select any zone when playback, and Left click to zoom in, Right click to exit.

Fast forward and Slow playback

Button	Illustration
Fast play	In playback mode, click this button to switch between various fast play modes such as fast play 1,fast play 2 and more.(Fast play 1 means fast play level 1 or not about speed)
slow play key	In playback mode, click this button to switch between various slow play modes such as slow play 1 or slow play 2.
Play/Pause	In slow playback mode, click this button to switch between play/pause modes.
Previous/next	In playback mode, you can click and to view previous or next video in current channel.

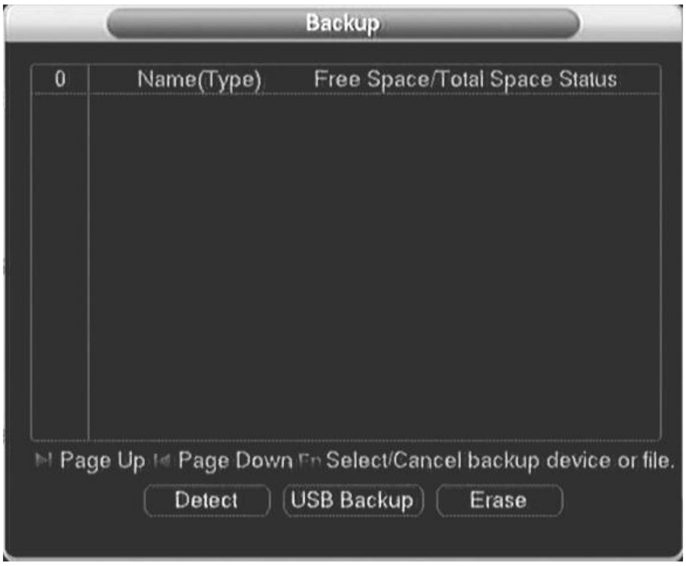
Backward playback and frame by frame playback

Button	Illustration	Remarks
Backward play	In normal playback mode, left click	When system is in

in playback interface.	backward play button, system begins backward playback. Double click backward play button again, system goes to pause mode.	backward play or frame by frame playback mode, you can click play button to go to normal playback.
Manual playback frame by frame.	Click pause button in normal playback mode, slowly turn the jog (inner dial) clock-wise to view frame by frame, counter clock wise to view I frame playback.	

3.5.3Backup

Backup the recorded files to local storage device, support USB storage devices, support FAT32, NTFS;



Detect: Detect the USB portable device connected with DVR, and display the device name, Free space / Total space status

USB Backup: list and backup the selected file, to the USB Devices, could be sorted by Record type, channel, time

Erase: erase all the data in the USB device

Start: Backup start

3.6Alarm

Sub-menu: motion detection, camera masking, video loss, alarm input, alarm input, abnormality.



3.6.1 Motion Detection

By analyzing video, when system detects sensitive moving signal, it will start motion detection alarm.



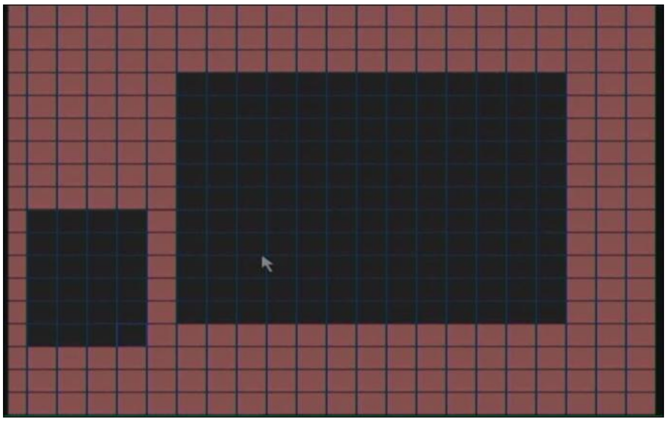
Operation method:

Channel: select the channel you want to implement motion detection.

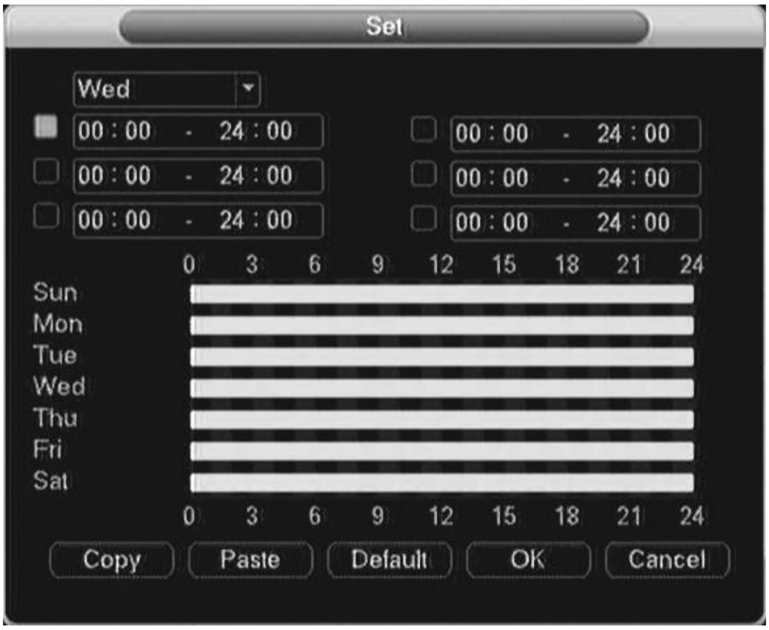
Enable: function enable switch

Sensitivity: System supports 6 levels. The sixth level has the highest sensitivity.

Region: can set 396（22*18）zones. The black is open zone; the pink is motion detection zone.



Period: Click set button, you can see an interface is shown as in below. Here you can set your own setup for business day and non-business day 。



Alarm output: when alarm occurred, system enables peripheral alarm devices

Tigger Delay: System auto delays detecting for a specified time. The value ranges from 10-600 (Unit: second)

Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300 (Unit: second)

On-screen: reverse display means allowing on-screen. There is connection motion on the screen when alarm signal happens.

Send email: System can send out email to alert you when alarm occurs.

Channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface (Main Menu->Setting->Schedule) and schedule record in manual record interface (Main Menu->Advanced->Manual Record)

PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click "select" button,



Tour: Here you can enable tour function when alarm occurs. It is a one-window tour.

Latch: when motion detection, system auto delays recording for a specified time. The value ranges from 10-300 (Unit: second)

Buzzer: Default is "off"

3.6.2 Privacy Mask

When someone viciously masks lens, the system can alert you to guarantee video

continuity. You can select Alarm output, On-screen, PTZ Linkage.



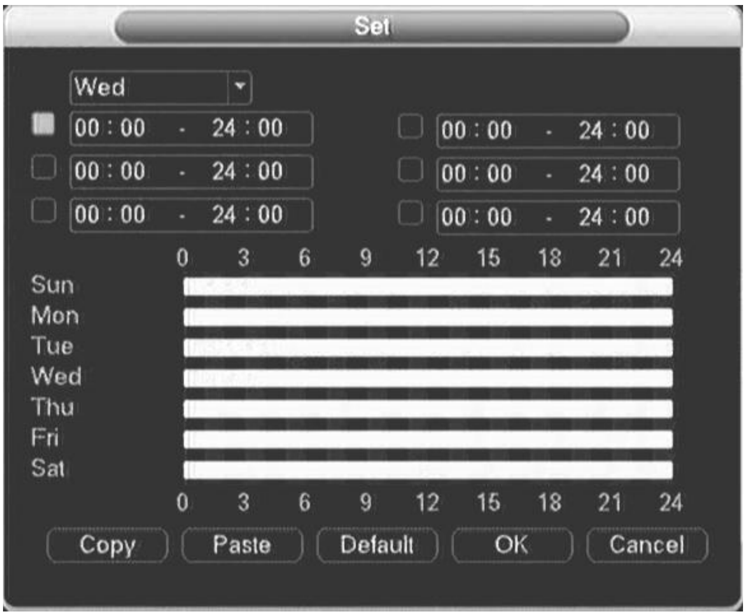
Operation method:

Channel: select the channel to record when camera mask occurred.

Enable: function enable switch

Sensitivity: there are six levels. The six-level has the highest sensitivity.

Period: Click set button, you can see an interface is shown as below. Here you can set for business day and non-business day. You can set up six time period, but they can't be repeated. The linear graphics show the period, you can copy the setting to other days



Alarm output: when camera masking occurred, system enables peripheral alarm devices

Latch: when camera masking, system auto delays detecting for a specified time. The value ranges from 10-300 (Unit: second)

On-screen: reverse display means allowing on-screen. There is connection motion on the screen when alarm signal happens.

Send email: System can send out email to alert you when alarm occurs.

Channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface (Main Menu->Setting->Schedule) and schedule record in manual record interface (Main Menu->Advanced->Manual Record)

PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click “select” button,

Tour: Here you can enable tour function when alarm occurs. It is a one-window tour.

Recording Latch: when motion detection complete, system auto delays recording for a specified time. The value ranges from 10-300 (Unit: second)

Buzzer: Default is “Off”



3.6.3 Video Lost

When video loss happens, you can select ALARM OUTPUT or video loss show information in local mainframe screen.

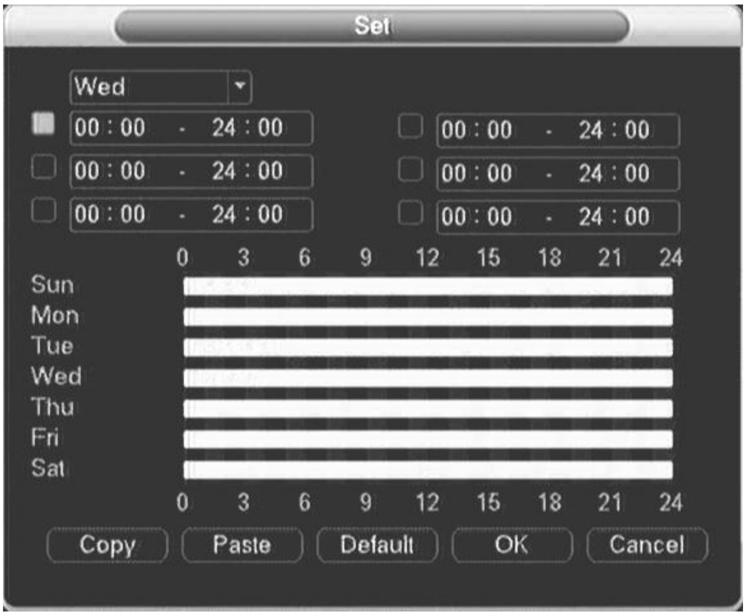


Operation method:

Channel: select the channel you want to enable lens shading alarm.

Enable: function enable switch

Period: Click set button, you can see an interface is shown as in below. Here you can set for business day and non-business day. You can set up six time period, but they can't be repeated. The linear graphics show the period, you can copy the setting to other days



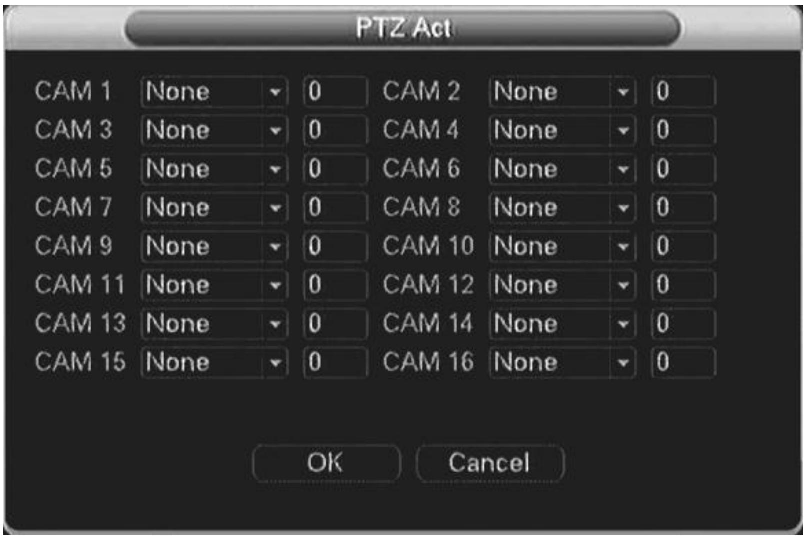
Alarm output: when alarm occurred, system enables peripheral alarm devices.

Show Message: reverse display means allowing on-screen. There is connection motion on the screen when alarm signal happens.

Send email: System can send out email to alert you when alarm occurs.

Channel: select the channel to record when video loss occurred.

PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour & pattern when there is an alarm.



Tour; Here you can enable tour function when alarm occurs. It is a one-window tour.

Latch: when video lost complete, system auto delays detecting for a specified time. The value ranges from 10-300 (Unit: second)

Channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface (Main Menu->Setting->Schedule) and schedule record in manual record interface (Main Menu->Advanced->Manual Record)

Recording Latch: when video lost complete, system auto delays recording for a specified time. The value ranges from 10-300 (Unit: second)

Buzzer: Default is “off”

3.6.4 Alarm Input

Setting at main menu>alarm function>alarm input.

According to the introduction of 2.4 alarm input/output device connection, please make sure you have properly connected alarm devices such as Alarm, lighter)

User can save each channel configure or save once till all channels are set

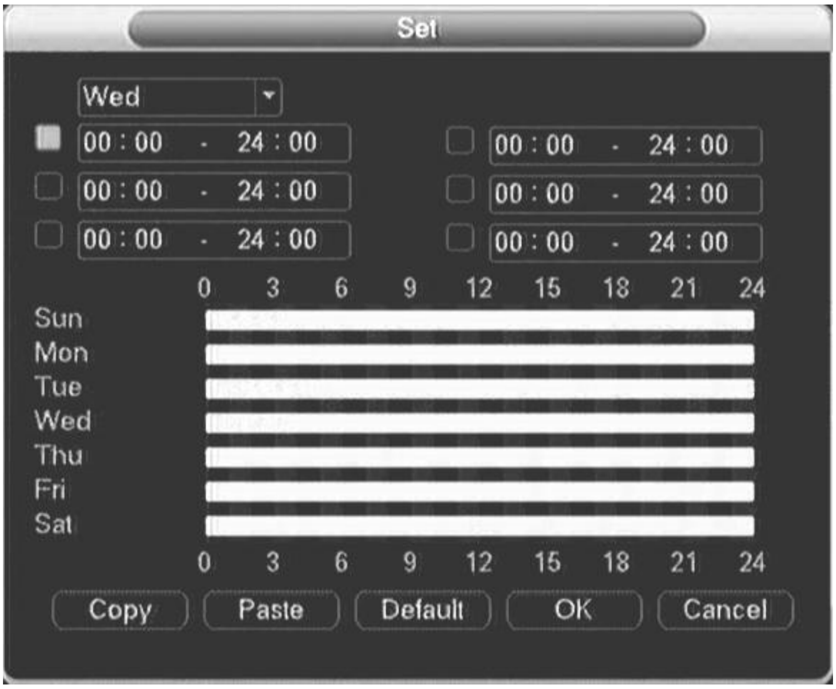


Alarm input: select alarm channel number

Enable: function enable switch

Type: normal open or normal close.

Period: Click set button, you can see an interface is shown as in below. Here you can set for business day and non-business day. You can set up six time period, but they can't be repeated. The linear graphics show the period, you can copy the setting to other days



Latch: Here is for you to set proper delay duration. Value ranges from 0 to 600 seconds.

Alarm output: activate peripheral alarm device when motion detection occurred.

Show message: System can pop up a message to alarm you in the local host screen if you enabled this function

Send email: System can send out email to alert you when alarm occurs.

Record channel: you can select proper channel to record alarm video (Multiple choices)

PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour& pattern when there is an alarm.



Tour: Here you can enable tour function when alarm occurs. It is a one-window tour

Latch: when alarm input, system auto delays detecting for a specified time. The value ranges from 10-300 (Unit: second)

Recording Latch: when alarm input complete, system auto delays recording for a specified time. The value ranges from 10-300 (Unit: second)

Buzzer: Default is "off"

3.6.5 Alarm Output

Setting at main menu>alarm function>alarm output.



Alarm Type: There are two types for you to select.

Schedule: Select all or "1"●, "2"●, "3"●, "4"● for the first channel、second channel、

third channel or forth channel.

Manual: Select all or “1”●, “2”●, “3”●, “4”● for the first channel、second channel、third channel or forth channel.

Stop: close alarm output.

Status: current device alarm output status.

3.6.6 Abnormity

Main menu→Alarm→Abnormity

Abnormality, as shows in picture 5-22,

Event type: no disk space, hard disk error, Not enough space, network failure ,IP address conflict,,.

No disk space: DVR does not connect to the disk or hardware is error.

Disk error: The system can not recognize because of disk error

Not enough space: Not enough space for the disk (the percentage of free space will be showed)

Network failure: The network connection disrupted or network connection error

IP conflict: The IP address of disk recorder network is fixed, the conflict will occur once there is another same IP is set in the internet.

Enable: function enable switch, reverse means “on”

Alarm output: when exception occurred, system enables peripheral alarm devices

On-screen: reverse display means allowing on-screen. There is connection motion on the screen when alarm signal happens.

Latch: system auto delays for a specified time. The value ranges from 10-300 (Unit: second)

Send email: System can send out email to alert you when alarm occurs.

Buzzer: Default is “off”

3.6.7 Digital Alarm

Setting at : Main menu→Alarm→Digital Alarm



Channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface (Main Menu->Setting->Schedule) and schedule record in manual record interface (Main Menu->Advanced->Manual Record)

PTZ activation: Here you can set PTZ movement when alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click "select" button,



Alarm output: when alarm occurred, system enables peripheral alarm devices

Tigger Delay: System auto delays detecting for a specified time. The value ranges from 10-600 (Unit: second)

Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300 (Unit: second)

On-screen: reverse display means allowing on-screen. There is connection motion on the screen when alarm signal happens.

Send email: System can send out email to alert you when alarm occurs.

Tour: Here you can enable tour function when alarm occurs. It is a one-window tour.

Latch: when motion detection, system auto delays recording for a specified time. The value ranges from 10-300 (Unit: second)

Buzzer: Default is "off"

3.7 Setting

Submenu: General, Encode, Network, Input, User Management, Pan/Tilt/Zoom, Serial Port, Tour.

Note: system setup will be done by user who has the authority



3.7.1 General



System time: here is for you to set system time

Date format: there are three types: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.

DST: Here you can set DST time and date. Please enable DST function and then click set button.



Date separator: there are three denotations to separate date: dot, beeline and solidus.

Time format: 24-hour and 12-hour

Language: system supports languages: Chinese (simplified), English,

HDD full: Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite.

Stop or rewrite may be selected while no space for the disk. The condition of stopping recording is the present working disk is full or under covering and the next disk is non-empty. The condition of rewrite is the present working disk is full and the next disk is non-empty.

DVR No: when you are using one remote control to control several DVRs, you can give a name to each DVR for your management.

Video standard: There are two formats: NTSC and PAL.

Output method: you can set self-adaptable, VGA input; TV input 3 types, support VGA and TV input at the same time.

Pack duration: Here is for you to set proper User’s operation duration. Value ranges from 0 to 60 Minutes. User need re-login the system after time out.

3.7.2 Encode

Support dual streaming: main streaming and sub streaming



Channel: select channel number

Compression: H.264;

Resolution: CIF or QCIF

Frame rate: PAL：1-25 f/s, 25 levels optional；NTSC：1-30 f/s, 30 levels optional

Bit rate: system supports two types: CBR and VBR

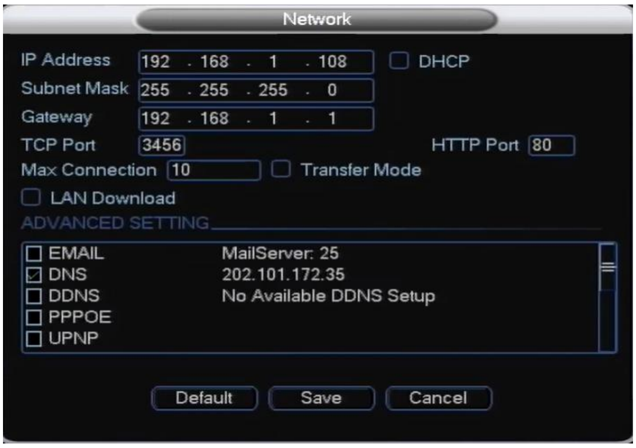
Quality: There are six levels ranging from 1 to 6. The sixth level has the highest image quality.

Bit rate: 0kb/s-4096kb/s optional

Frame interval: can set 1 frame, 2-12 optional.

Copy the same settings to all channels.

3.7.3 Network



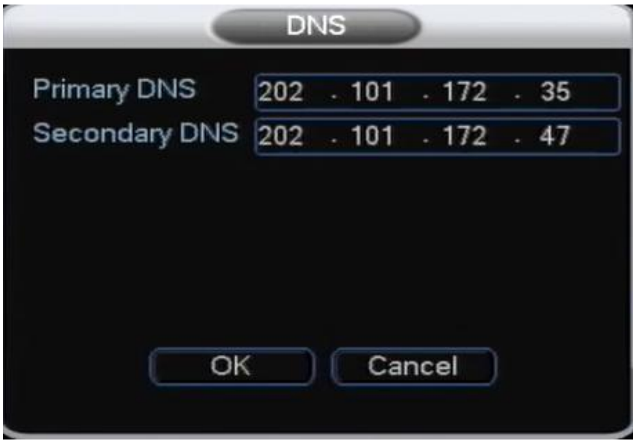
IP address, Subnet mask, Gateway: input from Front panel figure buttons to modify IP address, and subnet mask, gateway.

DHCP: highlight means select Dynamic Host Configuration Protocol；

TCP port: Default 34567, configurable according to user’s demand

HTTP port: Default 80, configurable according to user’s demand

UTP port: Default 37778, configurable according to user’s demand



Max connection: system support maximal 10 users. 0 means there is no connection

QoS: Here you can select the priority between fluency/video qualities

Network download: System can process the downloaded data first if you enable this function.



SMTP Server: Input server address and then enable this function.

Port: Default value is 25. You can modify it if necessary.

User Name: The sender email account user name.

Password: The sender email account password.

Sender: Sender email address.



Subject: Input email subject here.

Receiver: Receiver email address.

Note: Please fulfill the postfix of the mail address if it is virtual,(e.g. xxxx@yyyy.com) otherwise it is not allowed. (e.g. xxxx)

DNS

Primary DNS：According to local DNS

Secondary DNS ：According to local DNS



DDNSDDNS Type: Support DDNS server

Domain Name: Your self-defined domain name.

User: The user name you input to log in the server.

Password: The password you input to log in the server.



Server IP: DDNS server IP address

Server Port: DDNS server port.

PPPoE

User name: ADSL user name

Password: ADSL password

IP address: IP is distributed after successful dialing

External HTTP port: The external HTTP port of router, corresponds to the HTTP port of the equipment.

External HTTP port: The external TCP port of router, corresponds to the HTTP port of the equipment.

3.7.4 Display

Channel display: Click modify button. You can see an interface is shown as above, including time display, channel display, recording state, alarm state .

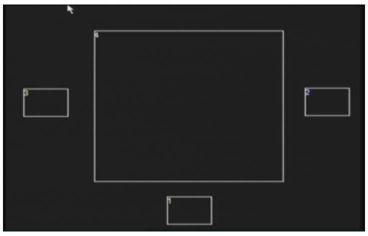
Transparency: Here is for you to adjust transparency. The value ranges from 128 to 255.

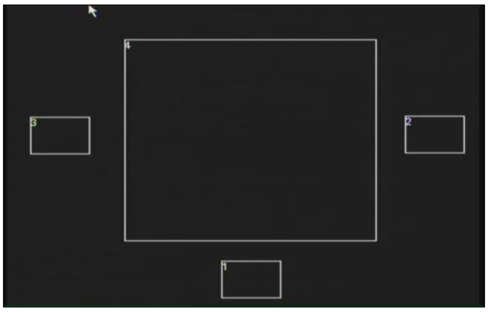




Channel: select the channel needed to set.

Cover area (Private masking): Here is for you to set window blanking section. You can drag you mouse to set proper section size





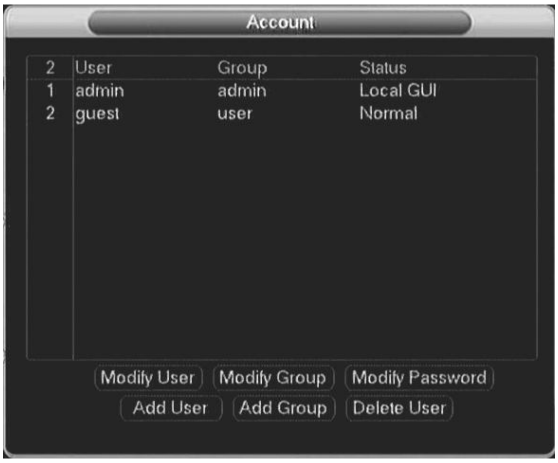
Time Display: You can select to display time by IE or playback.

Channel Display: You can select to display channel name by IE or playback.；

Setting: You can move or change the display location of “time display” , ”channel display”

3.7.5 Account

Management user account



Note:

The user name and group name can consist of six bytes. characters, number, underline, subtraction sign, dot, other characters are not allowed.

System account adopts two-level management: group and user. No limit to group or user amount.

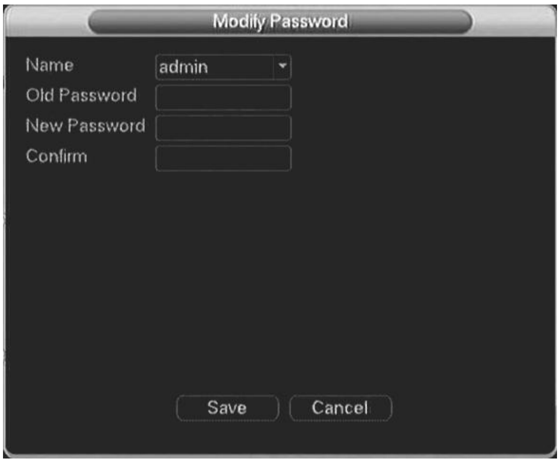
For group or user management, there are two levels: admin and user.

User management adopts group and user 2 class ways, group name can not repeat, user name can not repeat, each user must belong to certain group; one user can belong to one group only.

One user should belong to one group. User right can not exceed group right.

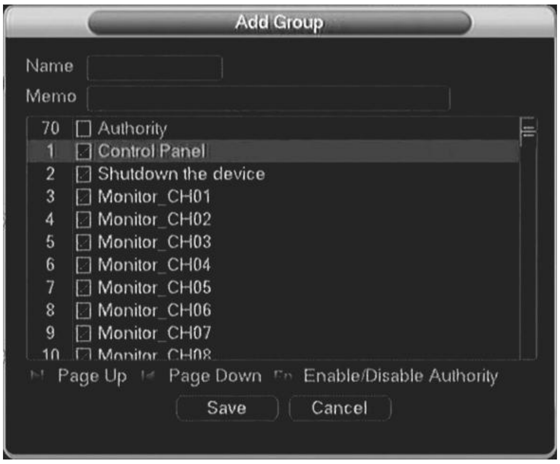
Modify password: select user name, input new password in new password blank and re-confirm password. Click SAVE button to confirm

Password modify: elect user name, input new password in new password blank and re-confirm password. Click save button to confirm. Space bar is allowed except the first and last character. In addition, users who have users account can not only change the personal password but also change other users' password.

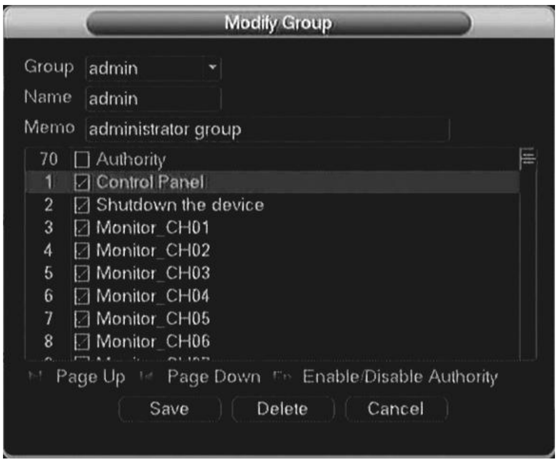


Add group: add group and set group authority

Enter adding group menu page, confirm the group name, select 47 corresponding rights, including control panel, shut down device, real time review, playback, record, backup, PTZ control, user account, system information, alarm input/output setup, system setup, log inquiry, deleting logging, updating system, device control, etc.



Modify group: modify existing group.



Add user: add group user and select corresponding rights



There are 2 default users: “admin” “guest”.

“admin” users have administrator right. The default password is “123456” for all 2 default users’ account. “guest” user only can review playback and backup.

About reusable function: this function allows multiple users use the same account to login.

Once select the user to a group, the user authority can not surpass this group authority property.

We recommend that normal user’s authority lower than other advanced user.

3.7.6 PTZ

Note: The camera video should be in the current screen. Before setup, please



check the following connections are right:

Address: input corresponding PTZ address.

Decoder A (B) line connects with DVR A (B) line.

Boot up the DVR, input user name and password.

In the main menu, click setting, and then click Pan/Tilt Control button。

Channel: select the current camera channel.

Protocol: select corresponding PTZ protocol, 18 protocols embedded.

Address: default address is 1.

Attention: this address must accord with camera's address; otherwise camera can not be controlled.

Baud rate: select corresponding baud rate. Default value is 9600.

Data bits: select corresponding data bits. Default value is 8.

Stop bits: select corresponding stop bits. Default value is 1.

Parity: there are five options: odd/even/none/blank. Default is none.

3.7.7 RS232

Function: There are various devices for you to select. Console is for serial port or min-end platform to upgrade program. Keyboard is for you to control current device.

Baud rate: You can select proper baud rate.

Data bit: You can select proper data bit.

Stop bit: There are three values: 1/2.

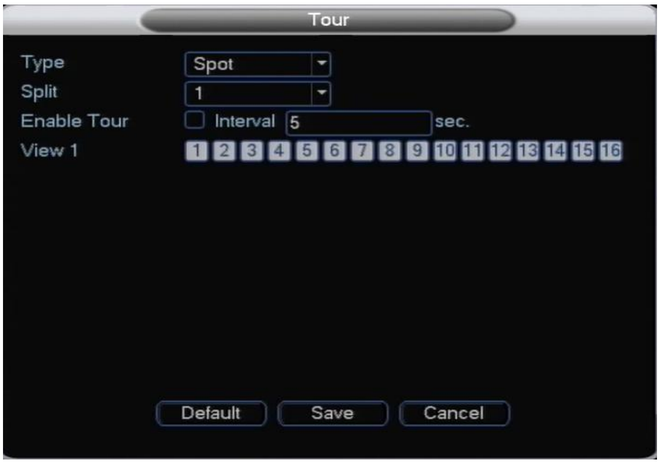
Parity: there are 4 choices: none/odd/even/blank

System default: Console, Baud rate is 115200, data bit is 8 digits, stop bit is 1, and Parity is none.



3.7.8 Tour

Set tour and time, interval is 5-120s, includes single picture, 4 pictures, 8 pictures, 9 /16pictures.



3.8 Adanced

Management tool menu includes: HDD management, On-line user, TV adjust, USB update, Auto Maintenance, Restore, and Shut Down.

3.8.1 HDD Management

Support 2 SATA HDD. Enter MENU>ADVANCED OPTION>HDD MANAGEMENT.DVR supports 2 SATA HDD. Enter MENU>ADVANCED OPTION>HDD MANAGEMENT.



If 2pcs HDD installed, then displayed as 1-2 in HDD. If selecting the first HDD, it displays current type, total capacity, and record time. You can modify HDD attribute, read-only disk, read-write disk, redundancy disk or delete all the data in the HDD. After all the setups please click OK button, system goes back to the previous menu

Note: You can set proper mode for each hard disk from the dropdown list.

When you use redundant backup function, you can set one or more redundant HDD(s).

Please note you need to set at least one read-write disk, otherwise system will not record video.

3.8.2 Digital Channle

Channel: select the current camera channel. Enable: function enable switch



Type: normal open or normal close.

Decode Policy: Set the digital channel policy, there are 5 selects

Video Audio: Select the Audio or Video or both

Remote Channle: Select the channel for remote

Steamtype: Main stream or Sub stream

IP Address: Set the device IP address

Port: Set the port value

Preset: Set the device preset

Name: Set the user name

Password: Set the user password

Device Search: Search the device and list in the below

3.8.3 USB Update

Connect to the USB port on the rear panel with the USB device, which has upgrade file, and then select the file to upgrade. The upgrade includes kernel, u-boot, setting, applications and file system.

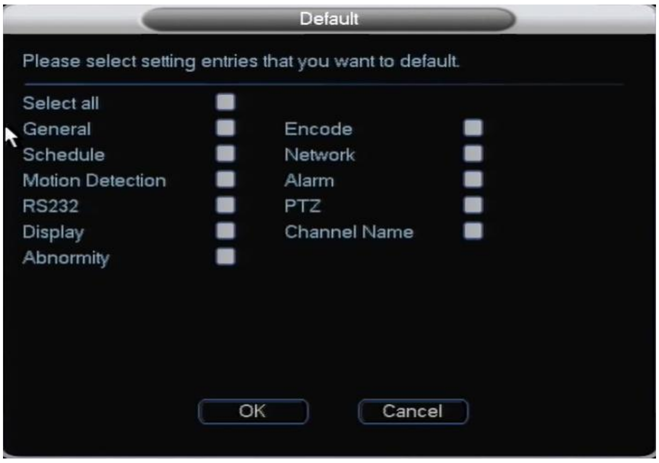
3.8.4 Configuration

Output setting

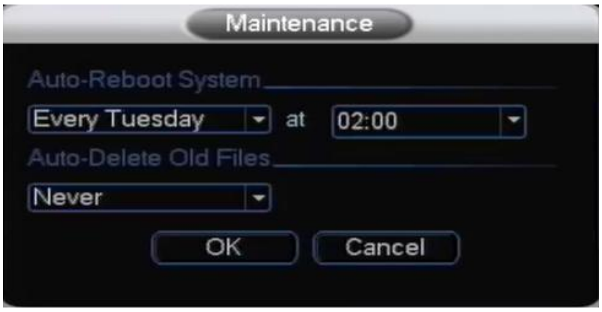
Connect to the USB interface on the rear panel with the USB equipment, set the system output into a file named cfg.coi

Input setting

Connect to the USB interface on the rear panel with the USB equipment, select setting file to input.



3.8.5 Maintenance



Here you can set auto-reboot time and auto-delete old files setup...

You can select proper setup from dropdown list.

After all the setups please click save button, system goes back to the previous menu.

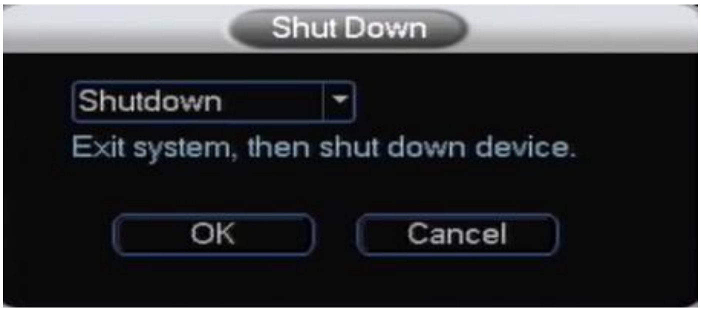
3.8.6 Default

You can highlight  to restore default factory setup.

Select all
General
Encode
Schedule

Network
Alarm
Detect
Pan/tilt/zoom
Display
Channel name
RS232 setting
Abnormity

3.8.7 Exit



Logout: exit menu, you need to provide password again when entering the menu next time.

Shut down machine: logout system turns off power

Restart system: system begins rebooting.

Switch: switch users

When push the power switch button, will appear a confirmation progress bar, shut down 3 seconds after, can been cancelled during progress.

You have to input password to exit

3.9System Information



3.9.1 HDD Information

Here is to list hard disk type, total space, free space, video start time and status

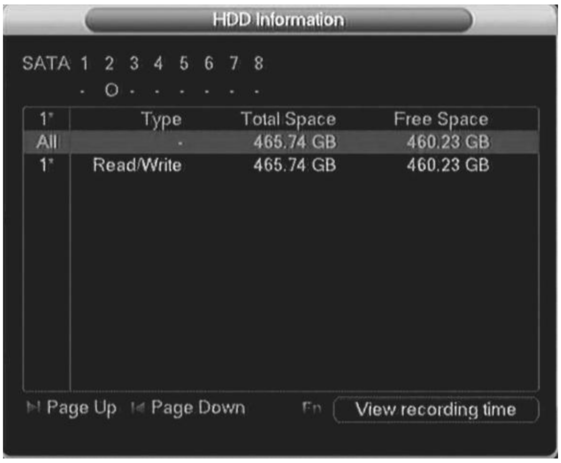
Note:

Please remove the broken hard disk before you add a new one.

Once there is a hard disk confliction, please check hard disk time and system time is the same or not. Please go to setting then general to modify system time. At last, reboot the system to solve this problem.

Note: ○ means current HDD is normal. X means there is error. - means there is no HDD. Please remove the broken hard disk before you add anew one. If disk is damaged, system shows as “?”

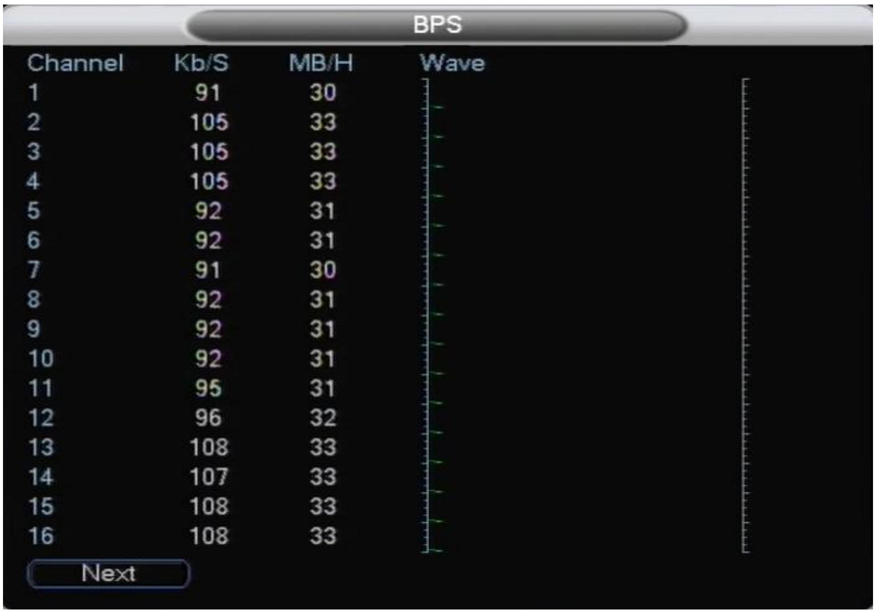
After system start, if there is conflict, will jump to HDD information page immediately, user can check the system time and HDD time, If conflict please enter normal setup to modify system time, or enter advanced HDD management to format HDD, then restart device.



HDD array according to SATA interface sequence. For example, SATA1 HDD in the first, SATA2 HDD in the last.

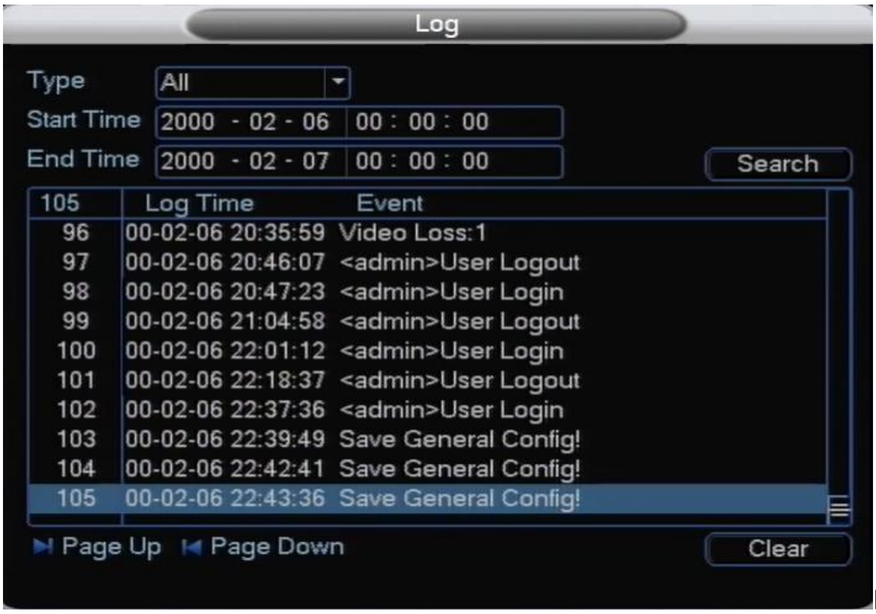
3.9.2 BPS

Here is for you to view current video data stream (KB/s) and occupied hard disk



storage (MB/h)

3.9.3 LOG



Here is for you to view system log file. System lists the following information.

Log types include system operation, configuration operation, data management, alarm event, record operation, log clear and etc.

Pleased select start time and end time, then click search button. You can view the log files. Please page up/down button to view if there are more than ten files.

3.9.4 Version

Display system hardware's feature, software version and issue date etc.

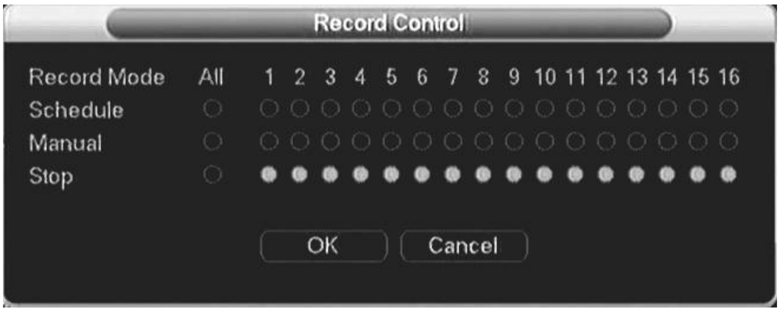


3.10 Record Control

There are two ways for you to go to manual record menu.

Right click mouse or in the main menu, Advanced->Manual Record.

In live viewing mode, click record button in the front panel or record button in the remote control



There are three statuses: schedule/manual/stop. Highlight icon"○" to select corresponding channel.

1. Manual: the highest priority. After manual setup, all selected channels will begin ordinary recording.
2. Schedule: channel records as you have set in recording setup (Main Menu->Setting->Schedule)
3. Stop: all channels stop recording.

Enable all channel recording: system enable all channel recording

Stop all channel recording: System stops all channel recording

1. Enable/disable record

Please check current channel status: "○" means it is not in recording status, "●" means it is in recording status.

You can use mouse or direction key to highlight channel number.

Enable all channel recording

Highlight ○ below All, you can enable all channel recording.

All channel schedule record

Please highlight "ALL" after "Schedule".

When system is in schedule recording, all channels will record as you have previously set (Main menu->Setting->Schedule).

The corresponding indication light in front panel will turn on

2. All channel manual record

Please highlight "ALL" after "Manual.".

When system is in manual recording, all scheduled set up you have set in will be null ((Main menu->Setting->Schedule)).

You can see indication light in front panel turns on, system begins manual record now.

3. Stop all channel recording

Please highlight "ALL" after "Stop".

System stops all channel recording no matter what mode you have set in the menu (Main menu->Setting->Schedule)

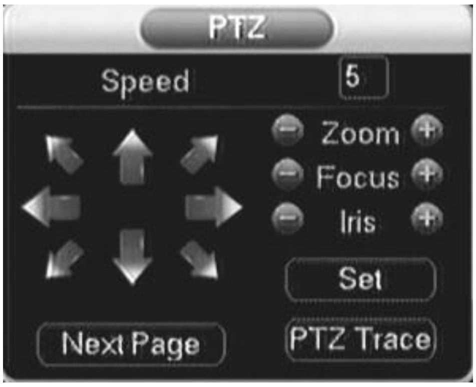
3.11 PTZ Control

Note: The protocols not supported will be displayed in grey color.

Here you can set the following items: Step, Speed, Zoom, Focus, Iris, Presets, Patrol, Pattern, Line Scan, AGC, BLC, etc.

Hide PTZ menu by double click the menu title.

Click Pan/Tilt/Zoom, the interface is shown as below,



Speed: mainly to control direction. For example, step 8 is much faster than step 1. (Input the number 1~8 by mouse click or front panel, 8 is the biggest)

Click icon zoom, focus, iris, and to adjust zoom, focus and iris

Please click direction arrows to adjust PTZ position. There are total 8 direction arrows, up, down, left, right, left-up, right-up, left-down, right-down respectively. (up, down, left, right only when using front panel)

Name	Function key	function	Shortcut key	Function key	function	Shortcut Key
Zoom		Near	▶	▶	Far	▶▶
Focus		Near	◀	◀	Far	▶
Iris		close	‖◀	‖◀	Open	▶‖

Click the "set" button. The interface is shown as below. (shortcut key: video key "●") . Here you can set the following items: Preset, Tour, Pattern, and Border.



The function in figure 2 mainly according to protocols. If not support will be displayed as gray, right click mouse or press ESC key on the front panel back to figure 1.

Patrol setup (Tour Setup)

Click patrol button. The interface is shown as below. Input preset number and add this preset to a patrol (tour). For each patrol (tour), you can input max 80 presets.

Activate Patrol (tour)

Input patrol (tour) number in the No. blank and click patrol button



Pattern Setup

Click pattern button and then click “begin” button. The interface is shown as below. Then you can modify zoom, focus, iris and direction.

Click “end” button. You can memorize all these operations as pattern 1.

Input mode value in the No. blank, and click pattern button.

Auto Scan Setup

Click border button. Use direction arrows to select camera left limit

Then please click left limit button

Repeat the above procedures to set right limit.



Activate Auto Scan

Click "Auto Scan" button, the system begins auto scan. Correspondingly, the auto scan button becomes to stop button. Click stop button to terminate scan operation.

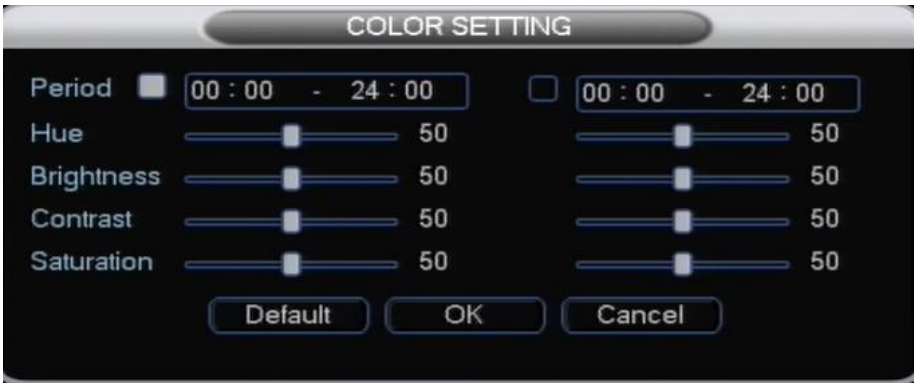
[Horizontal rotation] Enter the page as shows on Figure 5-65, click the button to turn the camera rotate horizontally (compare with the present position).



Note: Preset, tour and pattern all need the value to be the control parameter. You can define it as you require. You need to refer to your speed dome user's manual for Aux definition. In some cases, it can be used for special process.

3.12 Color Setting

According to time period, set hue, brightness, contrast, saturation and AGC, range is0～100，default is 50



3.13 TV Adjust

Adjust picture's up, down, left, right deflate. Please drag slide bar to adjust each item, adjust range value from 0 ~ 100, default value 0.



Addenda A FAQ

1. DVR cannot boot up properly.

There are following possibilities:

- ◆ Input power is not correct.
- ◆ Power connection is not correct.
- ◆ Power switch button is damaged.
- ◆ Program upgrade is wrong.
- ◆ HDD malfunction or something wrong with HDD ribbon.
- ◆ Front panel error.
- ◆ Main board is damaged.

2. Remote control does not work.

There are following possibilities:

- ◆ Remote control address is not correct.
- ◆ Distance is too far or control angle is too small.
- ◆ Remote control battery power is low
- ◆ Remote control is damaged or DVR front panel is damaged.
- ◆ Check if the system is lockup, login again

3. DVR often automatically shuts down or stop running.

There are following possibilities:

- ◆ Input voltage is not stable or it is too low.
- ◆ HDD malfunction or something wrong wit the ribbon.
- ◆ Button power is not enough.
- ◆ Front video signal is not stable.
- ◆ Working environment is too harsh, too much dust.
- ◆ Hardware malfunction.

4. System cannot detect hard disk.

There are following possibilities:

- ◆ HDD is broken.
- ◆ HDD ribbon is damaged.
- ◆ HDD cable connection is loose.

5. There is no video output whether it is one-channel, multiple-channel or all-channel output.

There are following possibilities:

- ◆ Program is not compatible. Please upgrade to the latest version.
- ◆ Brightness is 0. Please restore factory default setup.
- ◆ There is no video input signal or it is too weak.
- ◆ Check privacy mask setup or your screen saver.
- ◆ DVR hardware malfunctions.

6. Real-time video color is distorted.

There are following possibilities:

- When using BNC output, NTSC and PAL setup is not correct. The real-time video becomes black and white.
- DVR and monitor resistance is not compatible.
- Video transmission is too long or degrading is too huge.
- DVR color or brightness setup is not correct.

7. Cannot search local records.

There are following possibilities:

- HDD ribbon is damaged.
- HDD is broken.
- Upgraded program is not compatible.
- The recorded file has been overwritten.
- Record function has been disabled.

8. Video is distorted when searching local records.

There are following possibilities:

- Video quality setup is too low.
- Program read error, bit data is too small. There is mosaic in the full screen. Please restart the DVR to solve this problem.
- HDD data ribbon error.
- HDD malfunction.
- DVR hardware malfunctions.

9. There is no audio when monitor.

There are following possibilities:

- It is not a power picker.
- It is not a power acoustics.
- Audio cable is damaged.
- DVR hardware malfunctions.

10. There is audio when monitor but there is no audio when system playback.

There are following possibilities:

- Setup is not correct. Please enable audio function
- Corresponding channel has no video input. Playback is not continuous when the screen is blue.

11. Time display is not correct.

There are following possibilities:

- Setup is not correct
- Battery contact is not correct or voltage is too low.

- Crystal is not broken.

12. DVR cannot control PTZ.

There are following possibilities:

- Front panel PTZ error
- PTZ decoder setup, connection or installation is not correct.
- Cable connection is not correct.
- PTZ setup is not correct.
- PTZ decoder and DVR protocol is not compatible.
- PTZ decoder and DVR address is not compatible.
- When there are several decoders, please add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control is not stable.
- The distance is too far.

13. Motion detection function does not work.

There are following possibilities:

- Period setup is not correct.
- Motion detection zone setup is not correct.
- Sensitivity is too low.
- For some versions, there is hardware limit.

14. Cannot log in client-end or web.

There are following possibilities:

- For Windows 98 or Windows ME user, please update your system to Windows 2000 sp4. Or you can install client-end software of lower version. Please note right now, our DVR is not compatible with Windows VISTA control.
- ActiveX control has been disabled.
- No dx8.1 or higher. Please upgrade display card driver.
- Network connection error.
- Network setup error.
- Password or user name is invalid.
- Client-end is not compatible with DVR program.

15. There is only mosaic no video when preview or playback video file remotely.

There are following possibilities:

- Network fluency is not good.
- Client-end resources are limit.
- There is multiple-cast group setup in DVR. This mode can result in mosaic. Usually we do not recommend this mode.
- There is privacy mask or channel protection setup.
- Current user has no right to monitor.
- DVR local video output quality is not good.

16. Network connection is not stable.

There are following possibilities:

- ◆ Network is not stable.
- ◆ IP address conflict.
- ◆ MAC address conflict.
- ◆ PC or DVR network card is not good.

17. Alarm signal cannot been disarmed.

There are following possibilities:

- ◆ Alarm setup is not correct.
- ◆ Alarm output has been open manually.
- ◆ Input device error or connection is not correct.
- ◆ Some program versions may have this problem. Please upgrade your system.

18. Alarm function is null.

There are following possibilities:

- ◆ Alarm setup is not correct.
- ◆ Alarm cable connection is not correct.
- ◆ Alarm input signal is not correct.
- ◆ There are two loops connect to one alarm device.

19. Record storage period is not enough.

There are following possibilities:

- ◆ Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct.
- ◆ HDD capacity is not enough.
- ◆ HDD is damaged.

20. Cannot playback the downloaded file.

There are following possibilities:

- ◆ There is no media player.
- ◆ No DXB8.1 or higher graphic acceleration software.
- ◆ There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- ◆ No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

21. Forget local menu operation password or network password

Please contact your local service engineer or our sales person for help. We can guide you to solve this problem.

Appreda B　DVR installation

Check unpacked DVR

- When you receive the DVR from the shipping agency, please check whether there is any visible damage to the DVR appearance.
- Open the box to check the accessories. Please check the items in accordance with the list on the warranty card
- Remove the protective film of the DVR

Front Panel and rear Panel

- This series DVR has two different front panels. You can refer to instruction
- The product model in front panel is the important information, please check with your orders
- The sticker on the rear panel is very important for our sales service, please keep it in a good situation, do not tear up, and diskard. It is needed to provide the product series number when you call for sales service

Check after open the case converter

Please check whether there is any visible damage on the cover, and the data cable in front panel, power cable, fan power connections.

Please carefully read those warning and any query please contact us.

1. Before installation, please open the package and check all the components listed.

Note: See attachment file B

2. All installation and operation here should conform to local electrical safety codes
3. The DVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc. Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

HDD installation

DVR need install HDD first, 1 ~ 2 HDDs could be installed into DVR enclosure (no

capacity limit), we recommend high-speed HDD 7200rpm or higher, and the SATA cable included in package

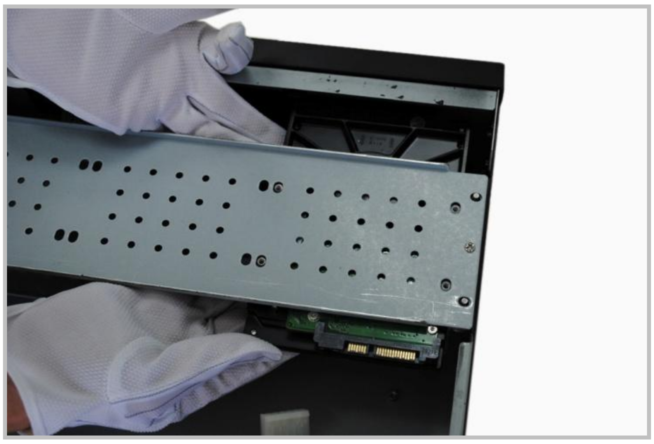
1.Loosen the screws on the top cover



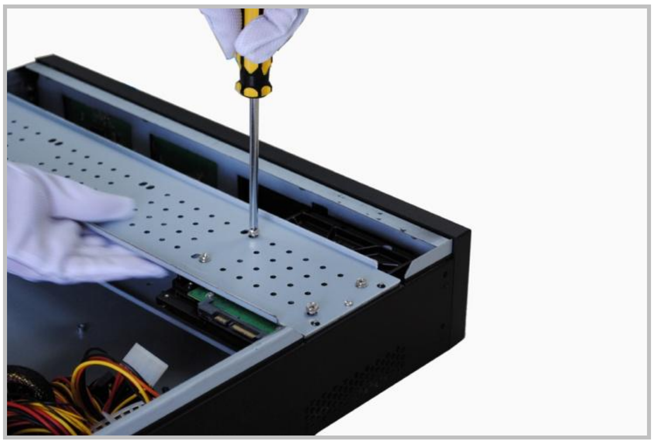
2.open the cover



3. Put the HDD on the HDD bracket



4. Use provided HDD screws, install HDD on the bracket

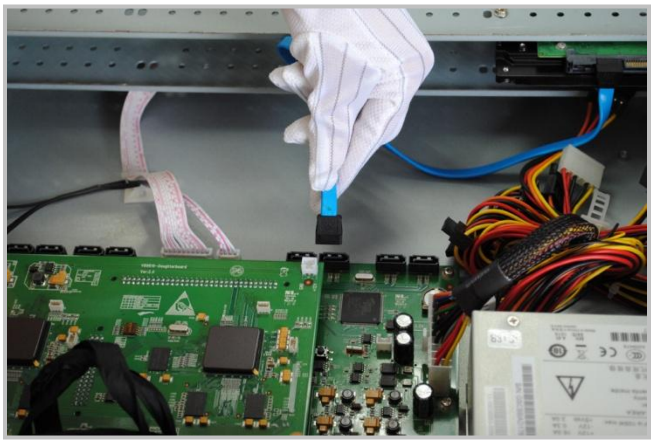


5. Fix the HDD bracket on the DVR HDD bracket



6. Use SATA cable connect to the DVR main board SATA ports,





8. And then connect power cord to the HDD



9. Close the DVR enclosure and screw firmly



Rack Mounting

We DVR uses standard 2U enclosure and adapt for industry rack mount

Steps and notes:

1 Fix the enclosure by 6 screws

2 Temperature should be lower than 35℃ (95°f).

3 15 cm (6 Inch) free space around the unit, be sure air flow is not obstructed.

4 Install the unit from top to bottom

5 Please check input voltage and device power button match or not.

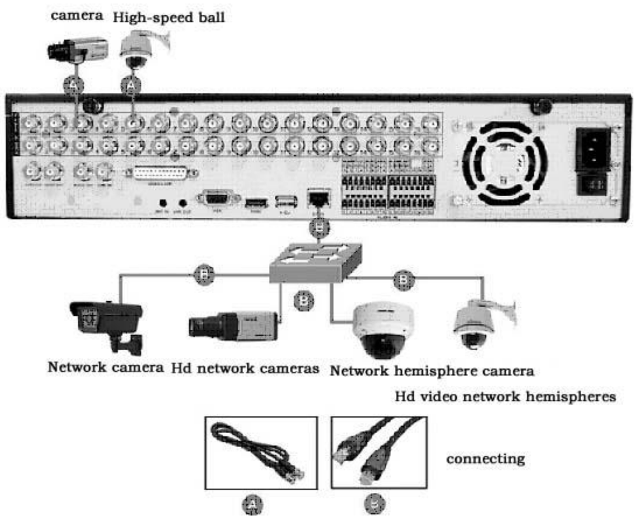
This version of User’s Manual for Standard 1U / 2U and Compact enclosure,

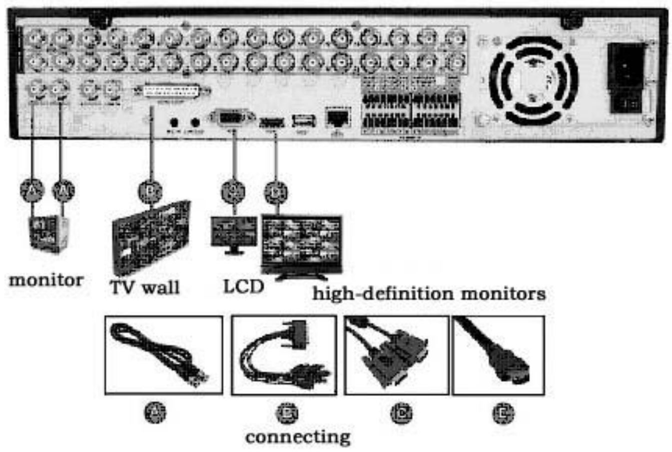
Video Input and Output

Video input connections:

- ◆ DVR provide BNC video input connector, input signal format PAL / NTSC (1.0V_{P-P}，75Ω）
- ◆ We suggest use coaxial cable for better video quality, video gain amplifier device or optic fiber may needed if long distance transmission
- ◆ Please make sure all coaxial cables are connected filmy.
- ◆ Note:

  The camera should be installed in a proper location, avoid direct sunshine backlighting, or low lighting. We recommend using the camera with backlighting compensation and low light compensation function



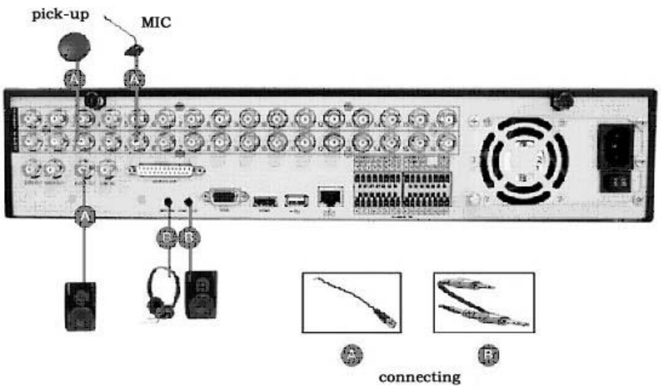


Make sure both camera and DVR are grounding properly

The coaxial cable should away from any devices or circuit with electromagnetic interference

Video output connection

- DVR have BNC (PAL BNC 1.0V_{P-P}, 75Ω) video output and VGA video output, can display at the same time
- When you connect the DVR with a TV monitor or VGA monitor, the DVR can automatically detects the monitor type
- We recommend the surveillance monitor specially designed for best display quality



When you use TV monitor or PC monitor, please note:

- Make sure the monitor grounding properly
- Degaussing frequently for better display quality
- Away from any devices or circuit with electromagnetic interference
- Not suitable for continuously working

Audio input and output

The DVR audio output signal is more than 200mv 1K (BNC or RCA)，can directly connect to low impedance headphones, active speakers, or other devices via amplifier

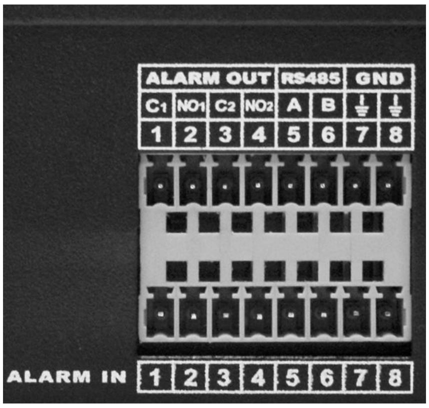
Note: if the active speakers and microphones are too close, there will cause high-frequency noise output, to avoid:

- Adjust the speakers volume to lower level
- Adjust the speakers and microphones location
- Use more sound-absorbing material in application environment, to reduce the audio

reflection

- ◆ Use better directional microphones

Alarm input and output



Alarm output sockets

- ◆ C_1 NO_1 ; C_2 NO_2 are 2 groups normal open linkage output（switching value）, "↓ ":grounding
- ◆ 2 channels switching alarm output（normal open contact）, alarm device should be with individual power supply
- ◆ Alarm when loop alarm grounding
- ◆ To avoid overload, please refer to relay specification as below:

Relay specification：

Model:	**JRC-27F**	
Material of the touch	Silver	
Rating (resistance load)	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch currency	1A
Insulation	Between contacts with same polarity	1000VAC 1minute 50/60Hz
	Between contacts with different polarity	1000VAC 1minute 50/60Hz
	Between contact and winding	1000VAC 1minute 50/60Hz
Surge voltage	Between contacts with same polarity	1500V (10×160us)

Length of open time	Max 3ms.	
Length of close time	Max 3ms.	
Longevity	Mechanical	50×106 times (3Hz)
	Electrical	200×103 times (0.5Hz)
Temperature	-40℃ ~+70℃	

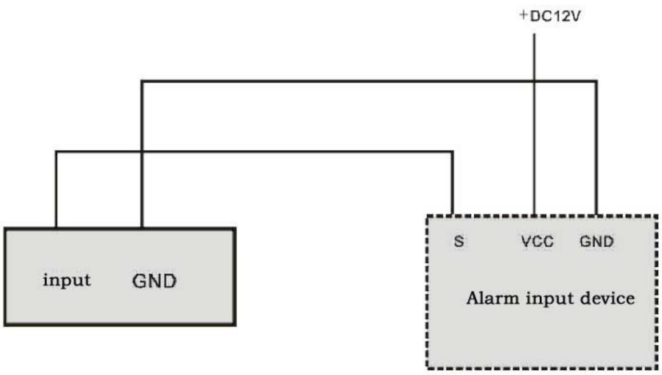
Alarm output note:

Max alarm output no more than 1A

- Avoid the power overload when output loop, may cause the damage
- Use the co contactor to isolate when high-power load

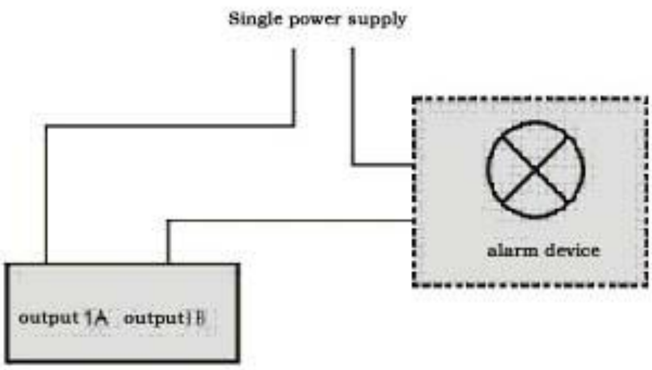
Alarm input sockets:

- Show on the figure, the second row 1, 2, 3, 4, 5, 6, 7, 8, corresponded to alarm input ALARM1～ALARM8
- Alarm input type could be normal open or normal close
- Grounding joining-up in parallel with Alarm detector and DVR
- Alarm detector NC port connected to DVR alarm input（ALARM）
- The alarm device should be grounding with DVR when use the outer power supply

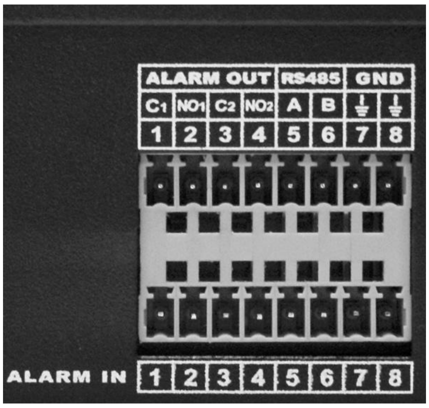


Alarm input note:

- Grounding alarm input
- Alarm input require the grounding voltage signal
- Use the co contactor to isolate when the alarm device connected to 2 sets of DVR, or 1 set of DVR and other device



PTZ control connection



Show as on figure, “RS-485, A, B” refer to RS485 A, B wire, connect to encoder or other control device

PTZ & DVR connection

1、Connect the speed dome camera RS485 cable to DVR RS 485 port

2、Connect the speed dome camera video cable to DRV video input

3、Connect power supply

PTZ connection note:

- Make sure both grounding for PTZ decoder and DVR, or else common mode voltage will cause the malfunction of PTZ control, we recommend to use the shielded twisted-pair cable
- Avoid the high voltage power interference, ensure the good cable wiring and avoid the lightning stroke
- 120-ohms resistance should be needed to ensure the signal quality, if more PTZ decoder connected
- The DVR RS485 cable should not be parallel connected with other RS485 devices
- The voltage between decoder wire A,B port should be less than 5V

◆ Make sure the grounding for front device

Appreda C overview of Navigation and Controls

System Boot up

Connect the power supply, press switcher on backside panel, indicator light up and DVR boot up. Default display mode is multiple picture output

System will start record video if set at schedule record mode, and the record channel indicator light up.

Login

When the system boots up, Click Enter or left click mouse, you can see the login interface.

There are 2 default users: “admin” “guest”.

“admin” users have administrator right. The default password is “123456” for all 2 default users’ account. “guest” user only can review playback and backup.



Password protection: you can input password 5 times within 30 minutes, otherwise the account will be locked.

For your system security, please modify you password after first login.

You can use USB mouse, front panel, remote controller or keyboard to input. About input method: Click 

to switch between numeral, English character (small/capitalized) and Chinese

System Shutdown

Note: Power off system before change the HDD.

Method 1: Press the POWER button at the front over 3sec to stop the disc video recorder, then shut the power off at the rear panel.

Method 2: System menu -> Shut down the system

Method 3: System menu -> Main menu ->Management tools -> Shut down the system.

Preview

Enter into "Preview" menu, you can setup date and time according to "General Setting", or setup the channel name according to "Output Mode"

1		The logo displayed on the screen when recording	**2**		The logo displayed on the screen when motion detection
3		The logo displayed on the screen when video lost occur	**4**		The logo displayed on the screen when camera masking occur

Auto Resume after Power Failure

The system can automatically backup video and resume previous working status after power failure.

Replace Button Battery

Please make sure to use the same battery model if possible.

We recommend replace battery regularly (such as one-year) to guarantee system time accuracy

Appreda E: WEB CLIENT OPERATION

IE Browser Setup

Please make sure your PC installed Microsoft Internet Explorer 6.0, and DirectX 9.0 or higher version.,

Note: Please turn off the Firewall and Antivirus Software if necessary. When log in the DVR first time, if all the functions run properly, in this case you could set the Security as default level.

Login

This chapter mainly introduces DVR's Web client-end operation.

Open IE and input DVR address in the address column. For example, if your DVR IP is 192.168.1.108, then please input http:// 192.168.1.108 in IE address column...



System pops up warning information to ask you whether install webrec.cab control or not. Please click yes button Please input your user name and password.

Default factory name is admin and password is 123456

Note: For security reasons, please modify your password after you first login

Please check the following items:

6.1 Network connection is right

6.2 DVR and PC network setup is right. IP address, Subnet Mask, Gateway, Please refer to network setup(main menu->setting->network)

3, Use order ping ***.***.***.***(* DVR IP address) to check connection is OK or not. TTL value 64

4. Web OCX will be downloading and install automatically, when update a new OCX, old version OCX should be uninstalled

System can automatically download latest web control and the new version can overwrite the previous one.

WEB client review interface

After you logged in, you can see the main window, double click the channel number in the right side tree structure, when the icon becomes a small camera, you can review this channel.



Toolbar

There are few function buttons in the toolbar, at upside and downside



Playback：Record video inquiry, playback and download
Configuration：DVR parameter configuration。
About: DVR Web Server version；
Quit: Quit the Web Server。

Preview window switch



 ：Set Fluency

 ：Full screen display；

 ：Single channel display

 ： 4-channel display；

 ： 6-channel display；

 ： 8-channel display；

 ： 9-channel display；

 : 13-channel display；

 ： 16-channel display；



： 20-channel display；



： 25-channel display；

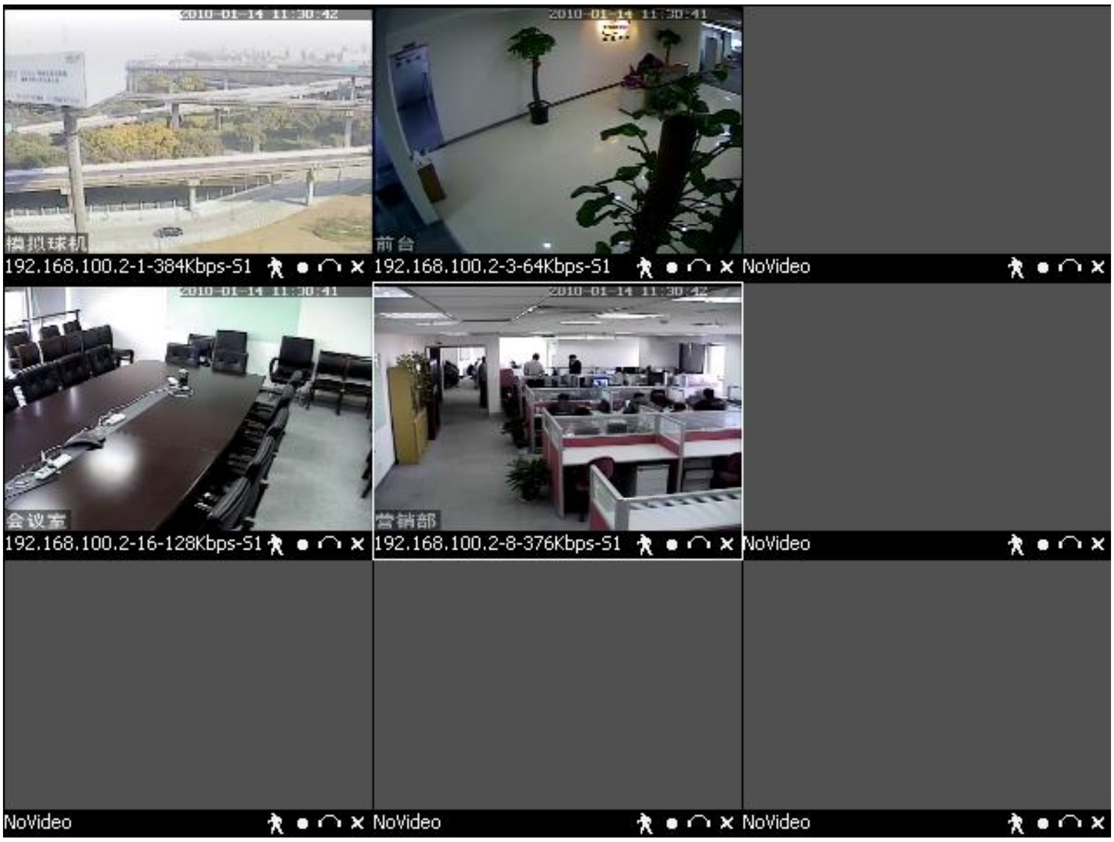


： 36-channel display。

Review the channel

Double click the channel number in the right side tree structure, when the icon become a small camera, you can review this channel.





Review

Review toolbar in the up-right side of channel, shown as below ;

: Capture picture. You can snapshoot important video. All images are memorized in folder C:\RC\;

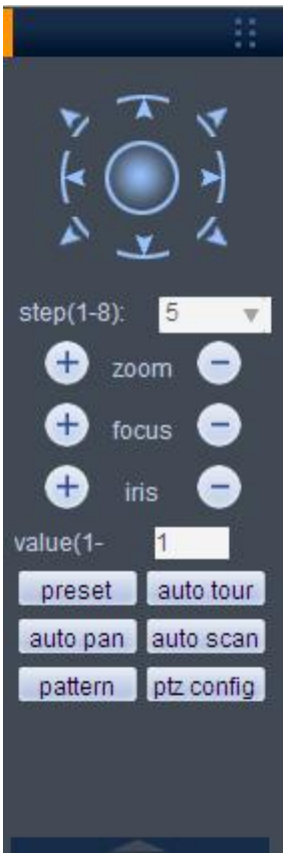
: Local record. When you click local record button, the system begins recording and this button becomes highlighted, all videos are memorized in folder C:\RC\ ;

: voice talk

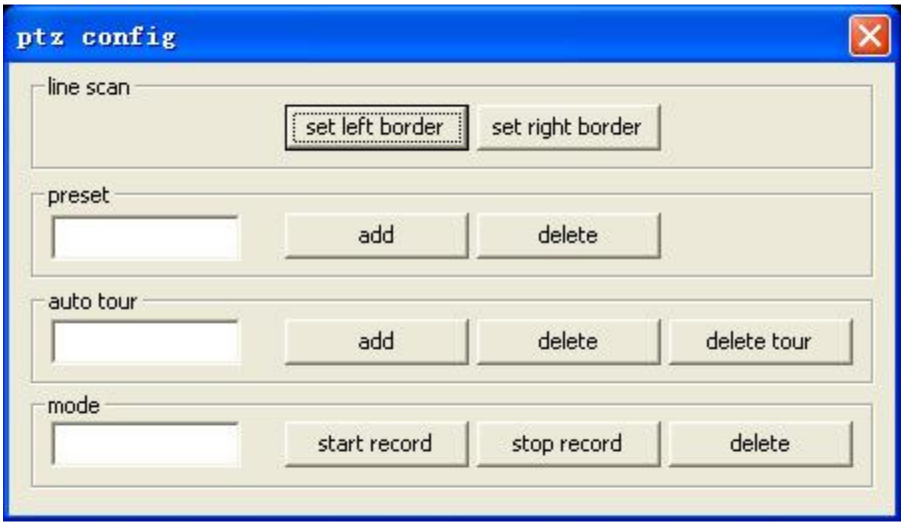
: Close video。

PTZ control function

WEB client’s PTZ function:



- Direction Key: 8 direction keys, Click and holding for continuous control.
- Step Speed: Control PTZ speed and patrol speed.
- Zoom: adjust and control PTZ zoom
- Focus: adjust and control PTZ focus
- Iris: adjust and control PTZ iris.
- Presets: Call preset after set preset value
- Pattern: you can input pattern value and then click start record button to begin PTZ movement.
- Flip: control PTZ camera to start vertical flip
- Auto Scan: control PTZ camera to start auto scan
- Auto tour: input auto tour value and preset value. Click add button, you have added one preset in the tour
- PTZ: Auto scan, Tour, Pattern, Present settings

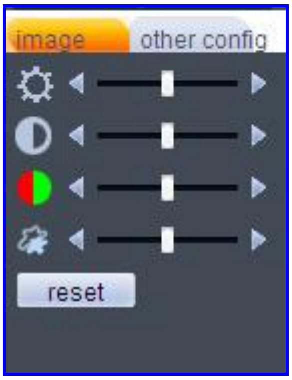


Click PTZ setup button you can see the following interface

- Click the PTZ camera channel, move the camera to you desired location and then click left limit button. Then move the camera again and then click right limit button to set a right limit. Now you have set one auto scan
- Click the PTZ camera channel, move the camera to your desired location and then input preset value. Click add button, you have set one preset. You can click to set one preset, or delete one preset
- Click the PTZ camera channel, input auto tour value and preset value. Click add button, you have added one preset in the tour. Repeat the above procedures you can add more presets in one tour.

Color setting

Set hue, brightness, contrast, saturation and AGC




: Brightness;


: Contrast;

 : Hue;

 : Saturation;



: Reset all to default;

Other setting

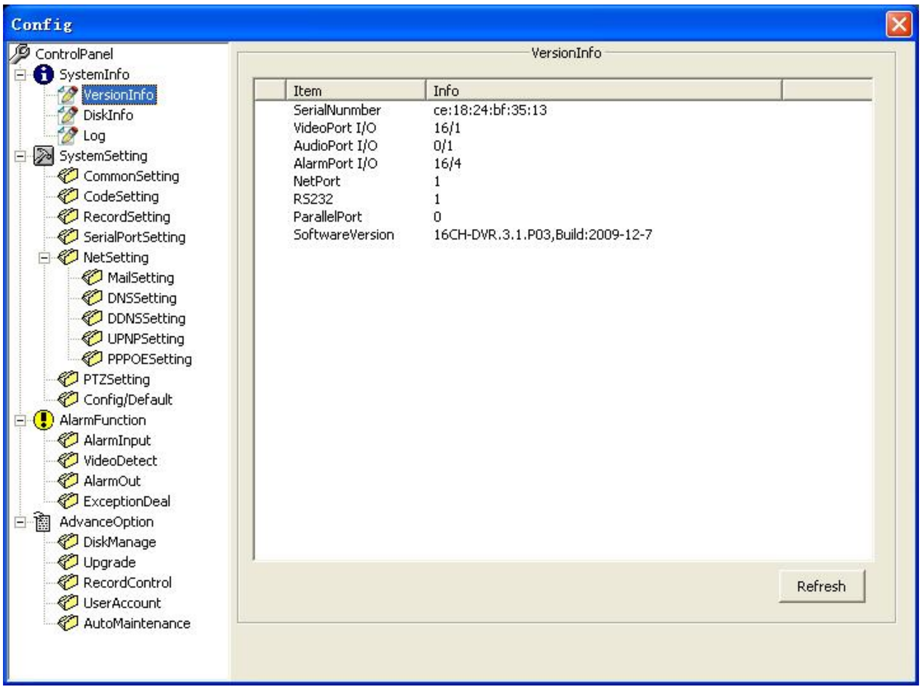


snapshot： Snapshot, and path：C:\RC\
record path： Record path：C:\RC\
reboot： Restart the device
record size： Set file size

WEB CLIENT Configure

System Info

In the main window, click config button, you can see an interface is shown as



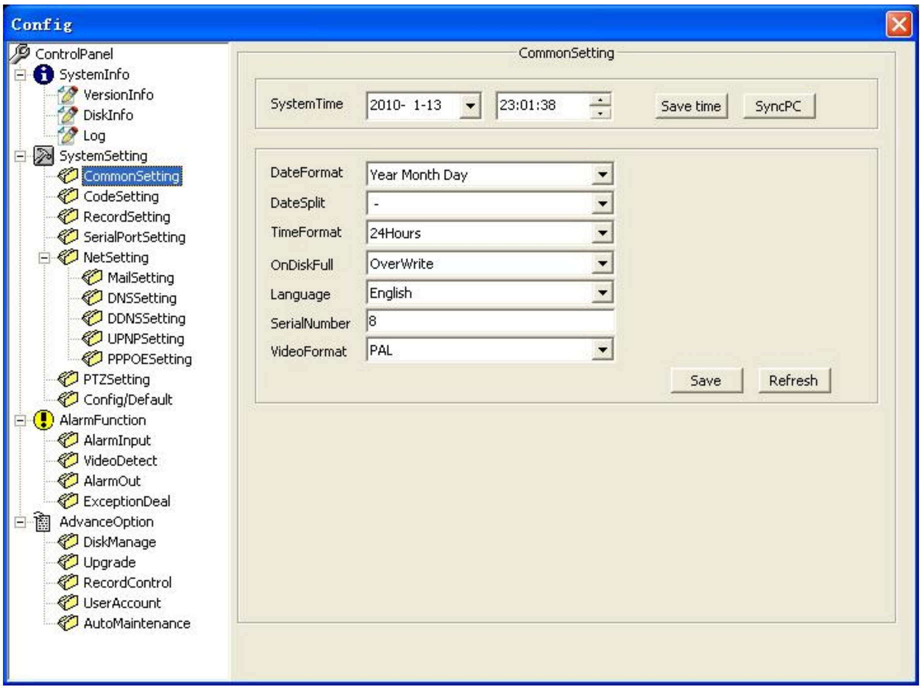
- System Information: Click device configuration button, you can see the following interface, Hardware version, HDD information, Interface, Log inquiry.
- Setting: Setting includes the following items: General, Encode setup, Schedule, RS232, Network, MUL-DDNS, FTP, Alarm setup,   Detect, Pan/Tilt/Zoom, Tool

Advanced: set DVR’s record, auto maintenance

System Setting

General

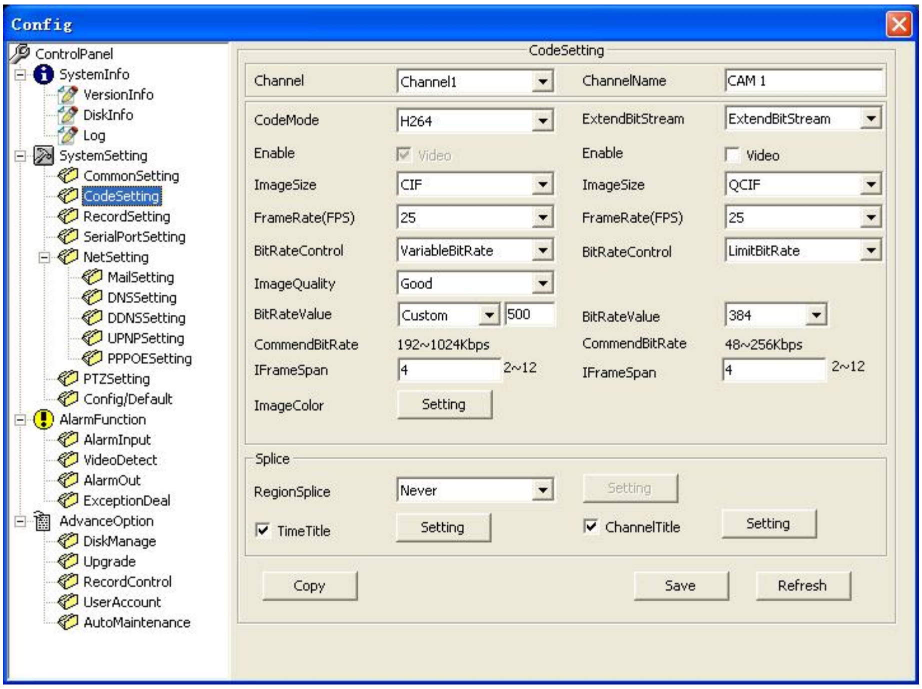
General interface is shown as below.；



- System time: Here is for you to modify system time. Please click Save after your modification
- Data format: Here you can select data format from the dropdown list.
- Data separator: Please select separator such as – or /.
- Time format: there are two options: 24-H and 12-H.
- HDD full: there are two options: stop recording or overwrite the previous files when HDD is full.
- Pack duration: Here you can select file size. Default setup is 60 minutes.
- Device No.: when you are using one remote control to manage multiple DVRs, you can give these DVRs serial numbers respectively. Click address button in your remote control and then input the correct device number, now you can control the DVR now.
- Video standard: PAL. (for your reference only)

Encode

Encode setup includes the following items



- ◆ Channel: Here is for you to select a channel.
- ◆ Compression: H.264;
- ◆ Data stream: Regular and extra data stream;
- ◆ AV enable: Video/Audio. System only displays video by default. You need to manually enable audio function
- ◆ Resolution: CIF / QCIF
- ◆ Differentiating rate: stocking differentiating rate's type is CIF or QCIF;
- ◆ Bit rate: There are two options: CBR and VBR. You can only set video quality in VBR mode, 10Kb/s-4096Kb/s variable
- ◆ Frame rate: The value ranges from 1f/s to 25f/s (PAL) and 1f/s to 30f/s (NTSC)
- ◆ Bit rate number: set bit rate according to web status, 10kb/s-4096kb/s adjustable;
- ◆ Frame interval: can set 1 frame, 2-12 optional.
- ◆ Image control: brightness, contrast, color, saturation and AGC for selected channel;
- ◆ OSD Overlay: time, date, title overlay.
- ◆ Click "copy" as following chart showing:

Schedule

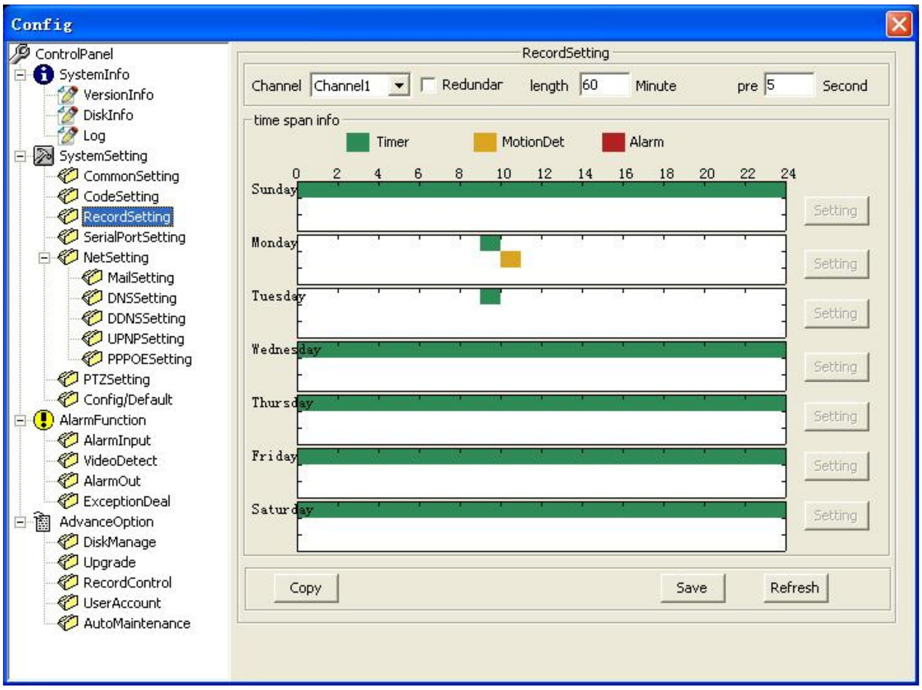
Schedule includes the following interface

When DVR boots up, it is in 24-hour continuous record. In this interface you can set record type, record time and period. Record type includes regular record(R), motion detection record (M) and alarm record (A).

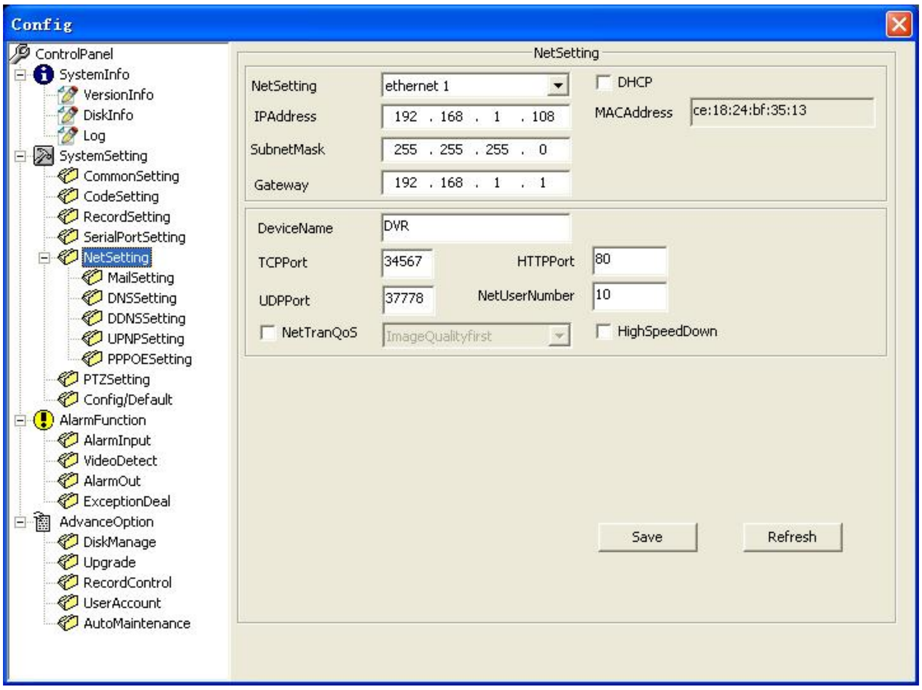
- Channel: select the channel number you desire.
- Week: you can select from the dropdown list. Or you can select at the bottom of the interface.
- Prerecord: system can record the three to five seconds video before activating the record operation into the file.(Depends on data size)
- Period: There are six periods for you to set. Please click set button of the corresponding period. Please note all the setup here shall be in one day. E.g. 00.00 to 24.00.

Tip

After you finished setup for one channel, you can click "save as" button, system pops up the following interface. Now you can copy one channel setup to other channels.;



RS232

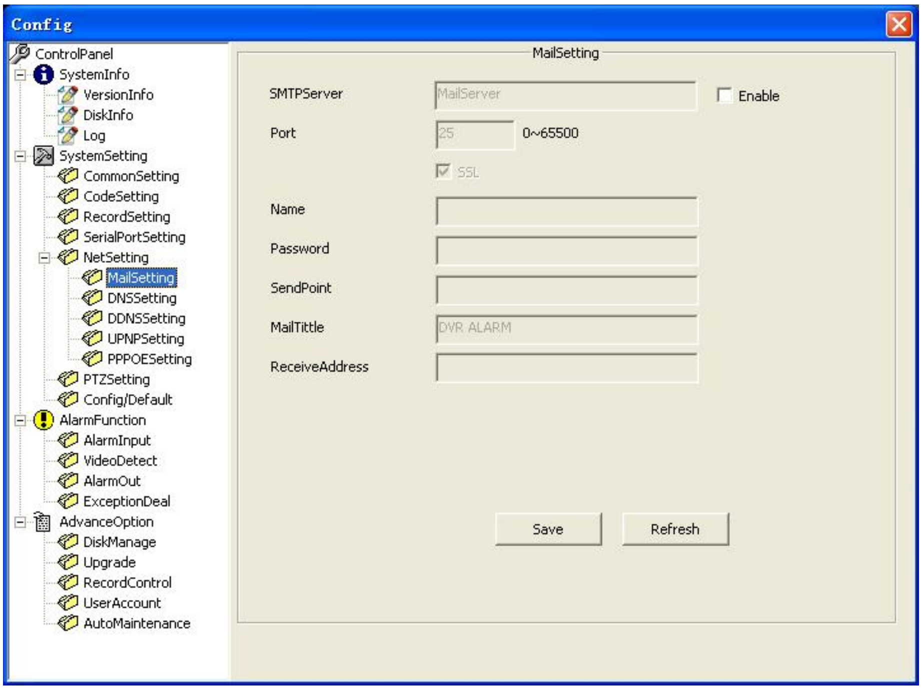


RS232 includes the following items.

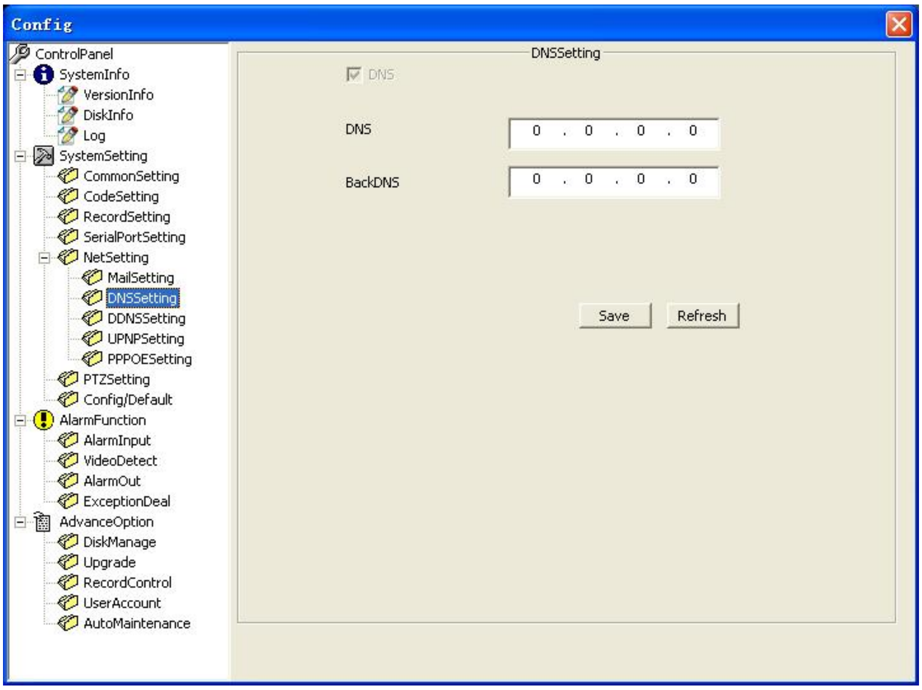
- Function: There are various devices for you to select. Console is for serial port or min-end platform to upgrade program. Keyboard is for you to use special keyboard to control current device.
- Baud rate: Please select as you desire.
- Data bit: The value ranges from 5 to 8.
- Stop bit: There are three options: 1/1.5/2.
- Parity: There are three options: none/odd /even.

Network

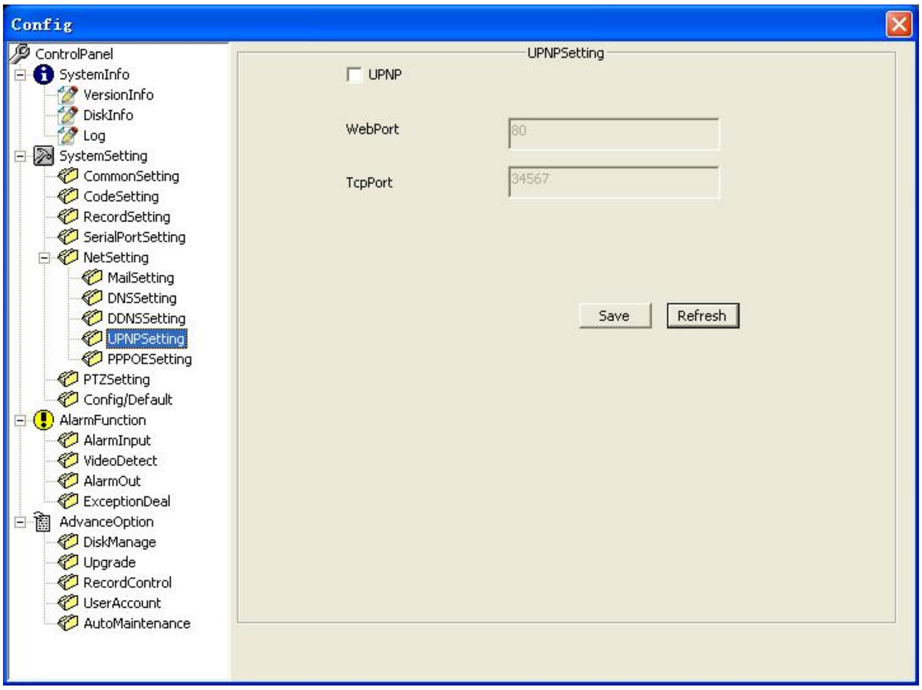
Network interface is shown as below.
This interface includes the following items；



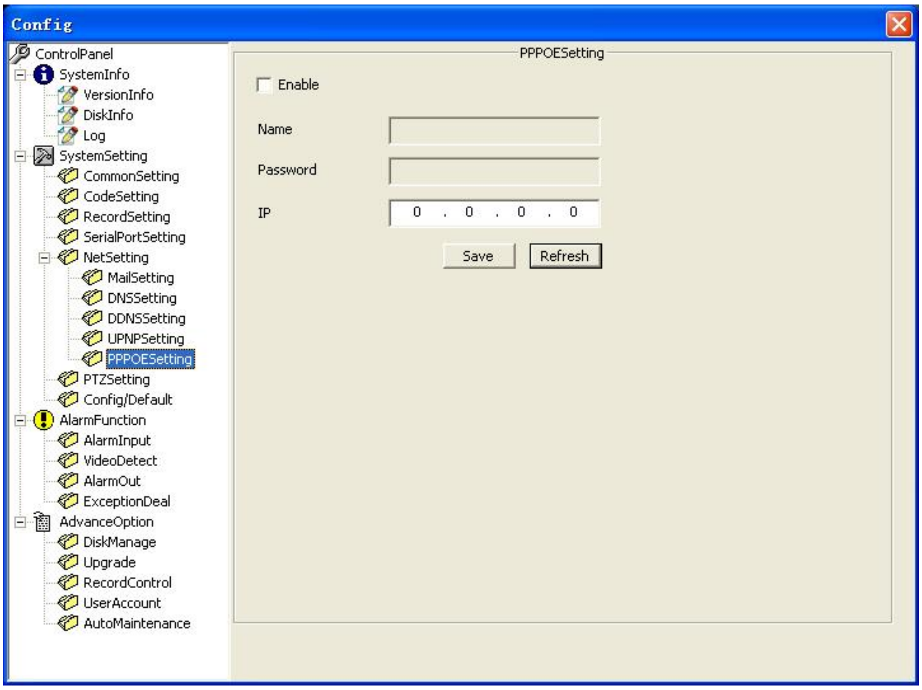
◆ DNS: Set DNS and backup DNS address
◆ DDNS: Set DDNS type, Domain name, User name, Password；



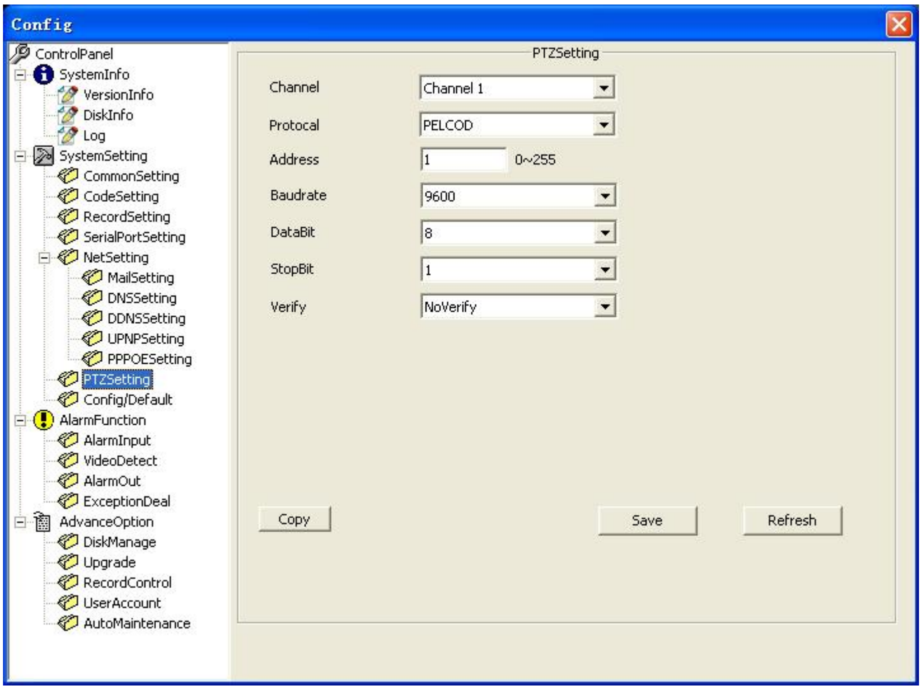
◆ UPNP: Set UPNP, Web Port, TCP Port



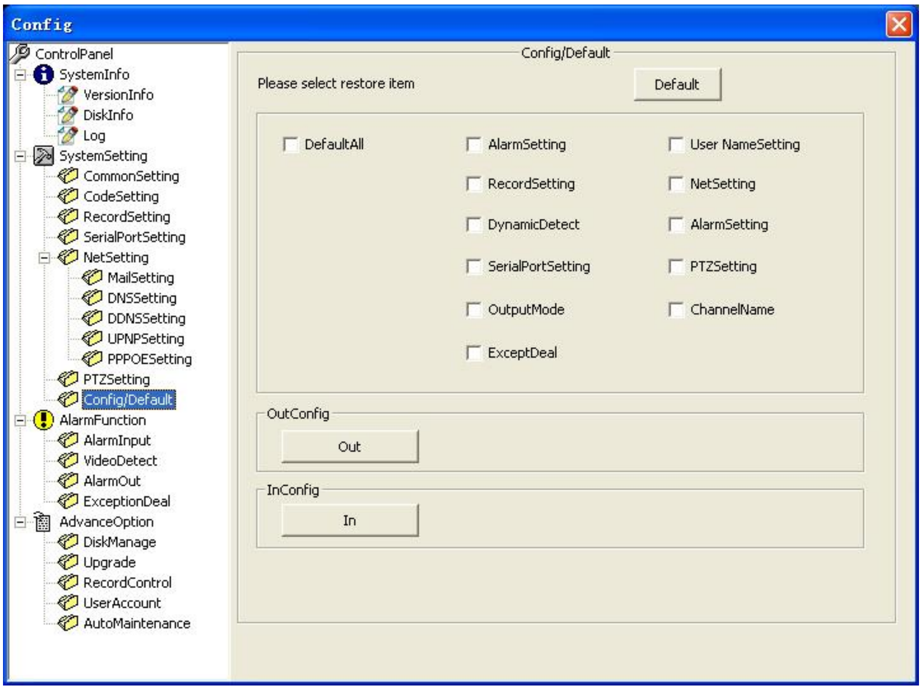
◆ PPPoE: Set PPPoE User name, password, and IP address



◆ PTZ: Set PTZ channel, protocols, bitrate, stop bit, data bit, varity, Default: PELCOD,1,9600,8,1,

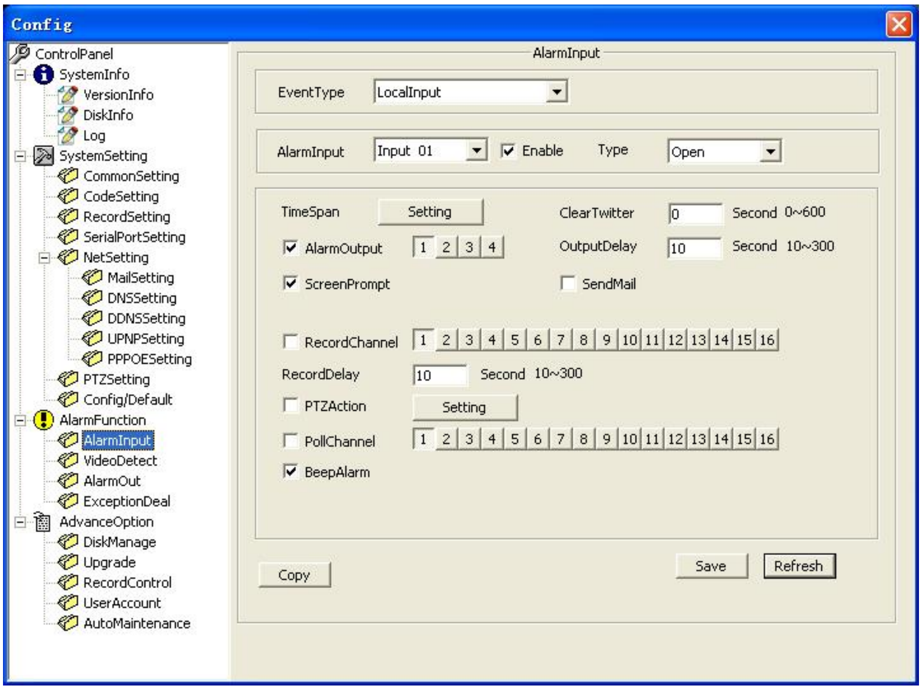


Reset to default: Reset selected functions to default

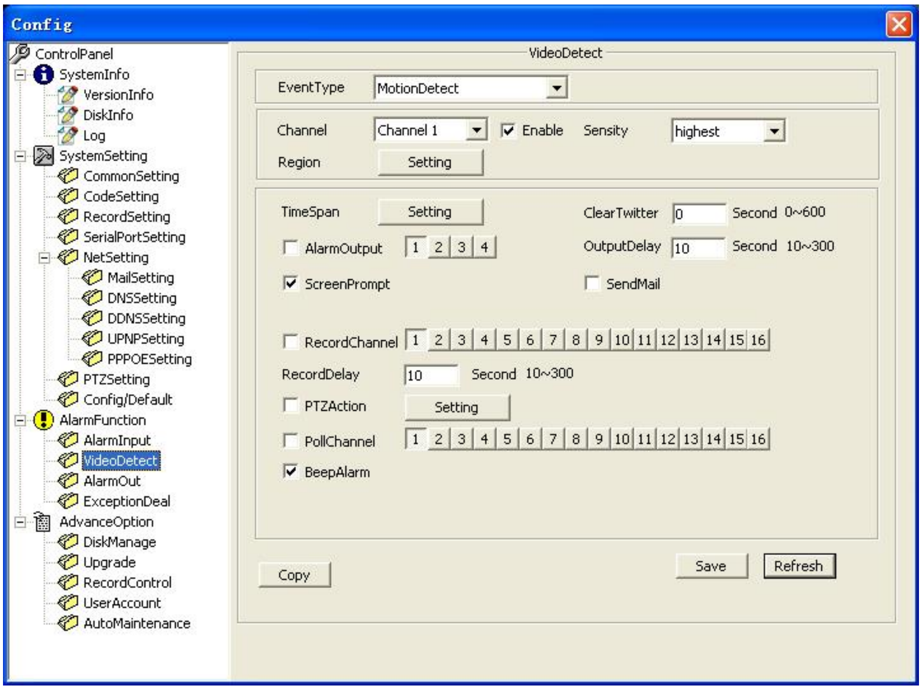


Alarm

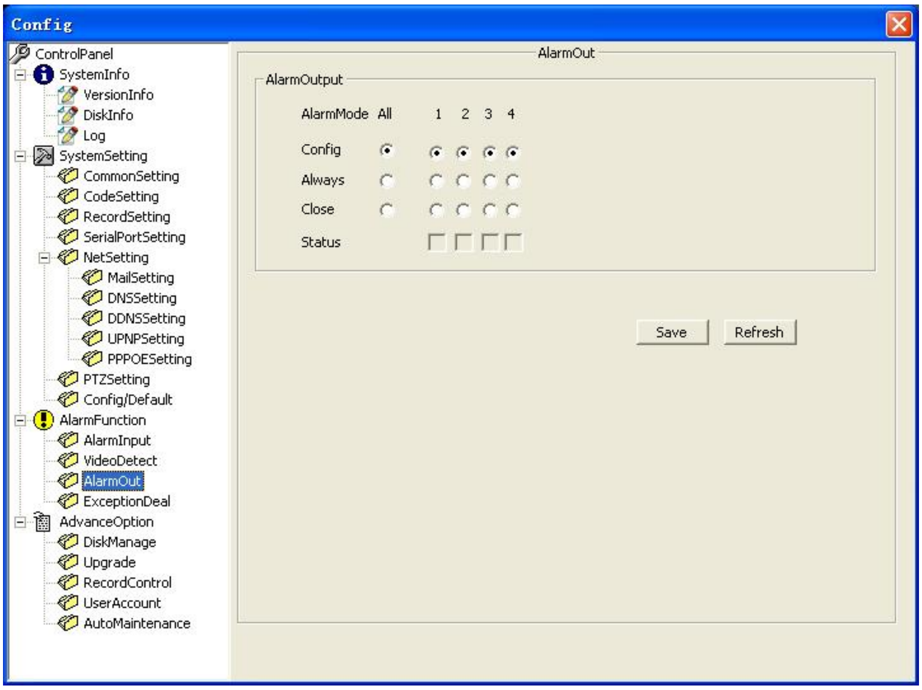
Alarm in: Select corresponding alarm in channel



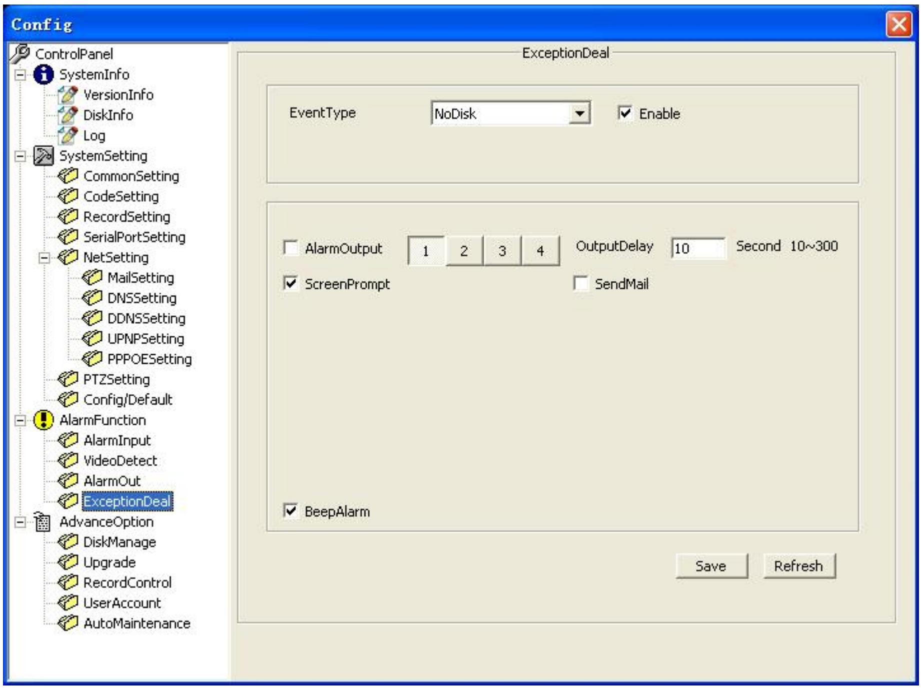
Video Detect: Set video detection area, latch, output channel, PTZ, Buzzer.



Alarm output: select alarm activation channel when alarm occurs.



Exception Deal: Event type: no disk space, hard disk error, Not enough space**,** network failure ,IP address conflict, Buzzer, send e-mail

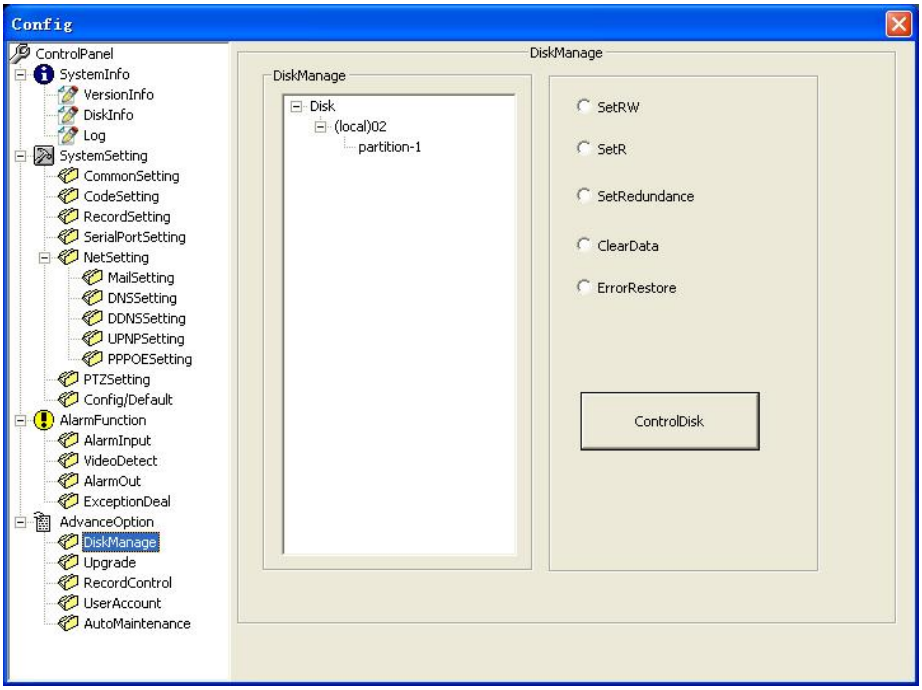


Advanced

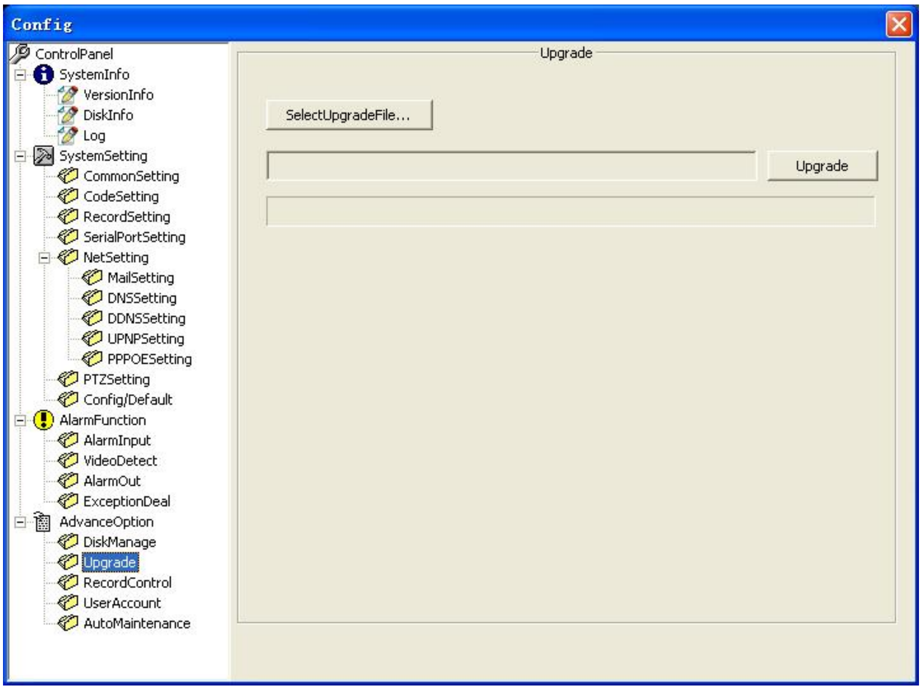
set DVR's record, Read, Write, auto maintenance。

Disk Manage: Set HDD as Read, Write, Read-only, Reduncey, Erase the data,

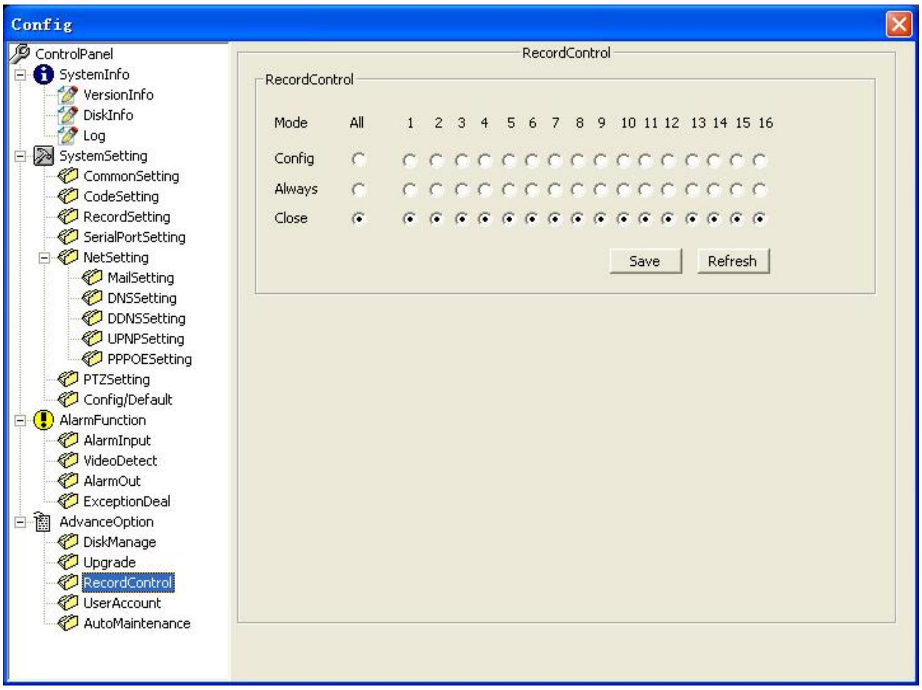
Restore



Upgrade: Select update file to upgrade the DVR；

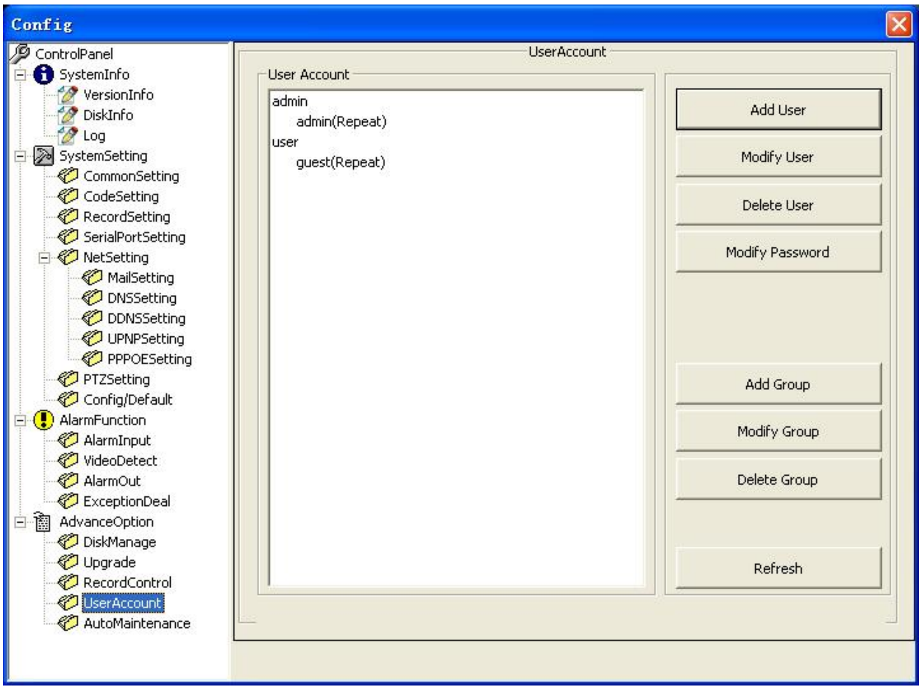


Record Control : Set record status: Schedule / Manual / Stop



User Account

User Account: Management user account, adding users, modity users, password, group.



Auto Maintenance, Reboot, auto delete old file

Addenda D

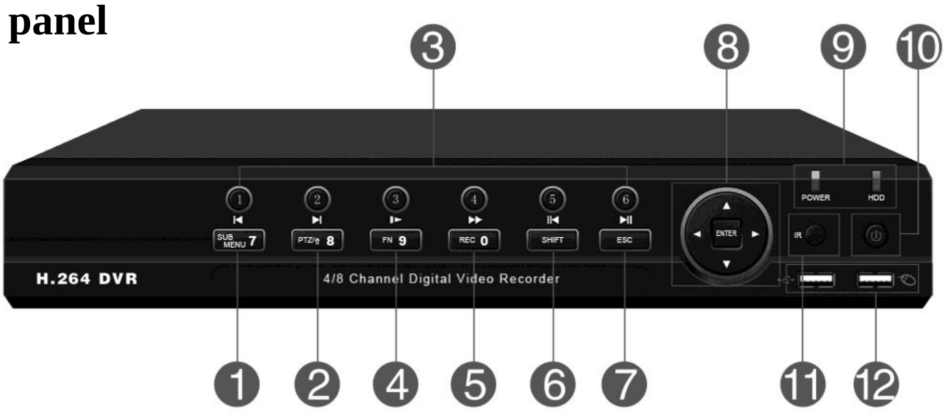
Front & Rear Panel



S/N	Name	Icon	Function
1	Up/down	▲ ▼	Activate current control, modify setup, increase/decrease numeral
			Activate current control, modify setup, increase/decrease numeral
			▲ number 1 ▼ number|letter 3 def
	Left/right	▶ ◀	Shift current activated control. When playback
			PTZ control
			▶ number|letter 2 abc ◀ number|letter 4 ghi
	Enter	↵	Confirm current operation
			System menu in review window
2	Shift	Shift	Function and number key switch
3	Slow Play	▮▸	Multiple slow play speeds or normal playback
			Zoom-
			Numeral | Letter 3 def
	Play Previous	▮◀	In playback mode, playback the previous video
			Focus-
			Numeral 1
	Play Nex	▶▮	In playback mode, playback the next video
			Focus+
			Numeral | Letter 2 abc
	Fast play	▶▶	Various fast speeds and normal playback.
			Zoom+
			Numeral | Letter 4 ghi
	Record	REC	Manually stop/start recording

			Enter PTZ setting in PTZ setting
4	**Power indicator Light**	PWR	Power indicator light
		NET	Network indicator light
		REC	Record indicator light
5	**Remote control**	IR	Receive remote control signal

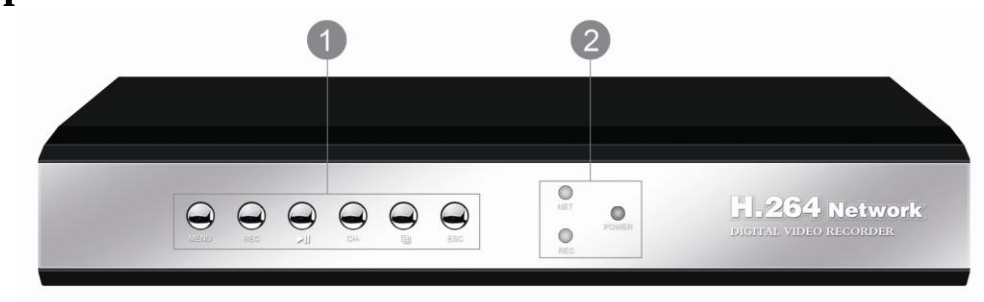
Front panel



S/N	Name	Icon	Function
1	**Sub Menu**	**Sub Menu**	Right-click sub menu
			Numeral | Letter 7 pqrs
2	**PTZ**	PTZ	Assistant function, PTZ control
			Numeral | Letter 8 tuv
	Input		Switch between different input methods
3	**Play/Pause**		Playback or paused mode, click this button to realize normal playback
			Iris+ Adjust iris
			Numeral | Letter 6 mno
	Reverse/Pause		In normal playback or pause mode, click this button to reverse In reverse playback, click this button to pause.
			Zoom-
			Numeral | Letter 5 jkl
	Fast play		Various fast speeds and normal playback.
			Zoom+
			Numeral | Letter 4 ghi
	Slow Play		Multiple slow play speeds or normal playback
			Zoom-
			Numeral | Letter 3 def

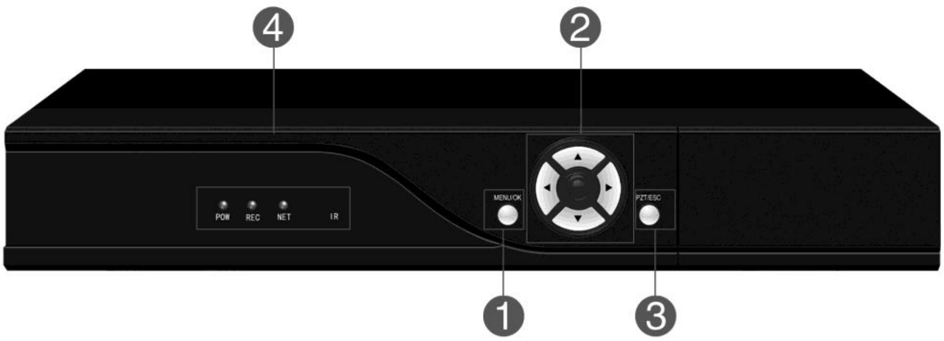
	Play Next	⏭	In playback mode, playback the next video
			Focus+
			Numeral | Letter 2 abc
	Play Previous	⏮	In playback mode, playback the previous video
			Focus-
			Numeral 1
4	**Assistant**	Fn	Assistant function: PTZ control and image color. In PTZ menu, shift PTZ control menu.
			Numeral | Letter 9 wxyz
5	**Record**	**REC**	Manually stop/start recording
			Enter PTZ setting in PTZ setting
			Numeral Key 0
6	**Switch**	**Switch**	Switch between function and numeral
7	**ESC**	**ESC**	Close upper interface or controls.
8	**Up/down**	▲ ▼	Activate current control, modify setup, increase/decrease numeral, assistant function such as PTZ menu
			Increase/decrease numeral, assistant function such as PTZ menu
	Left/right	▶ ◀	Shift current activated control. When playback, click these buttons to co playback bar.
			PTZ control
	Enter	↵	Confirm current operation
			System menu in review window
9	**indicator Light**	**Power**	Power indicator light
		Network	Network indicator light
		Status	When push any key, status indicator light will be on
10	**Power Button**	⏻	Power button, press for 3 seconds to shut down DVR.
11	**Remote control**	IR	Receive remote control signal
12	USB interface	USB	Only support USB mouse

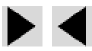
Front panel



S/N	Name	Icon	Function
1	Menu/enter	MENU	Enter operation
			Open system menu to view image
	REC	REC	Manually stop/start recording
	Play/Pause		Playback or paused mode, click this button to realize normal playback
	Multi-image switch/gxiang Direction down		**Multi-image switch**，activated control switch，move down
			Revise the setup，reduce the number，assistant control switch，PTZ control
	Right	CH+	Switch up chanel while single image，move right
			PTZ control
	ESC	ESC	Close upper interface or controls.
2	Indicater light	Power	Power indicater light
		Network	Network indicator light
		Recording	Record indicator light

Front panel



S/N	Name	Icon	Function
1	Enter	OK	Confirm current operation
			System menu in review window
2	Up/down		Activate current control, modify setup, increase/decrease numeral,
			Increase/decrease numeral, assistant function such as PTZ menu
	Left/right		Shift current activated control. When playback, click these buttons to control playback
			PTZ control
3	ESC	ESC	Close upper interface or controls.
4	Indicater light	Power	Power indicater light
		Network	Network indicator light
		Recording	Record indicator light

Front panel



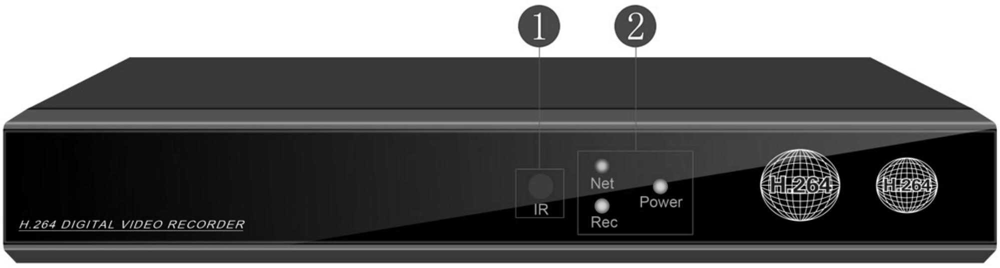
S/N	Name	Icon	Function
1	**Enter**	**OK**	Confirm current operation
			System menu in review window
2	**Up/down**	▲ ▼	Activate current control, modify setup, increase/decrease numeral,
			Increase/decrease numeral, assistant function such as PTZ menu
	Left/right	▶ ◀	Shift current activated control. When playback, click these buttons to control playbackr.
			PTZ control
3	**ESC**	**ESC**	Close upper interface or controls.
4	**Indicater light**	**Power**	Power indicater light
		Network	Network indicator light

Front panel



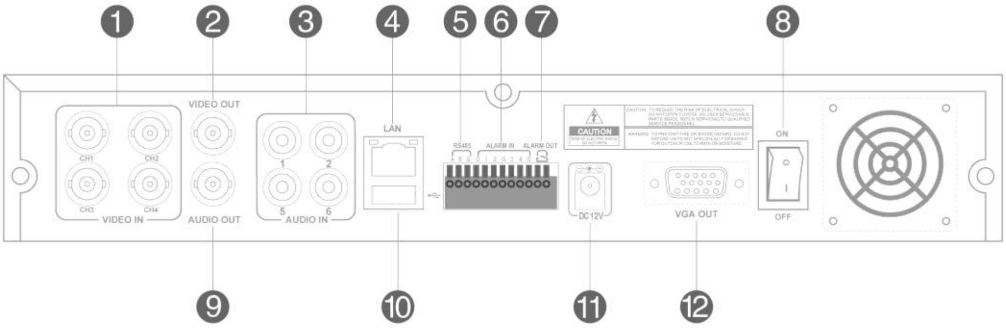
S/N	Name	Icon	Function
1	**Remote control**	**IR**	Receive remote control signal
2	**Indicater light**	**Power**	Power indicater light
		Network	Network indicator light

Front panel



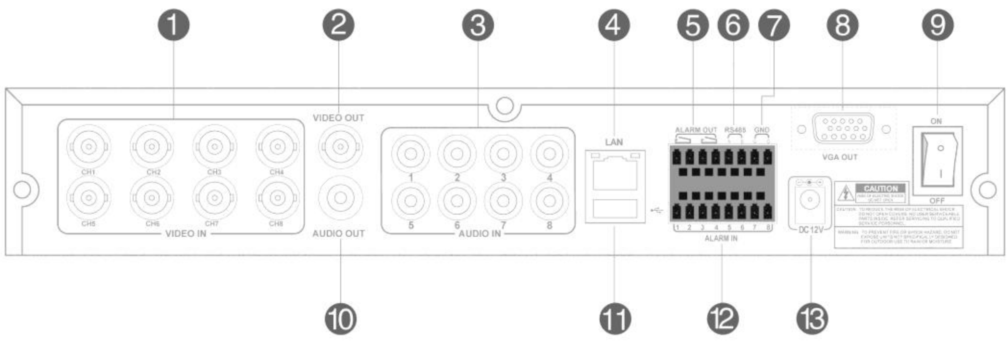
S/N	Name	Icon	Function
1	**Remote control**	**IR**	Receive remote control signal
2	**Indicater light**	**Power**	Power indicater light
		Network	Network indicator light
		Recording	Record indicator light

4Ch. arear panel：



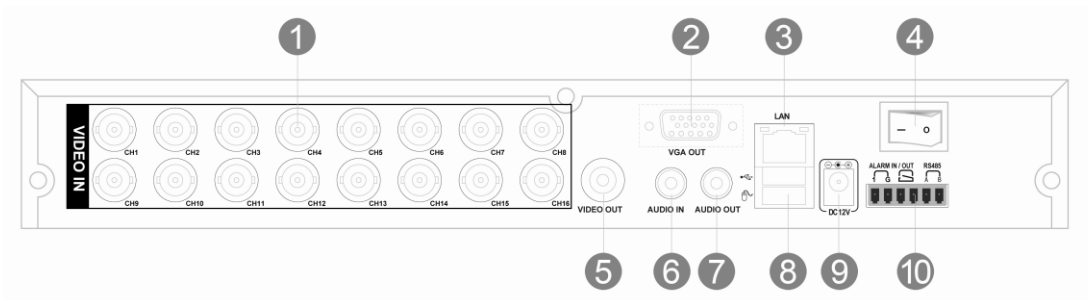
S/N	Function	S/N	Function
1	4 Channel Video Output	7	1 Channel Alarm Output
2	1 Channel Audio Input	8	Power button
3	4 Channel Audio Input	9	1 Channel Audio Input
4	RJ45	10	USB OTG 2.0 interface(Only for USB storage device)
5	RS485 port	11	DC 12V
6	4chanel alarm input	12	VGA Output

8Ch. A rear panel：



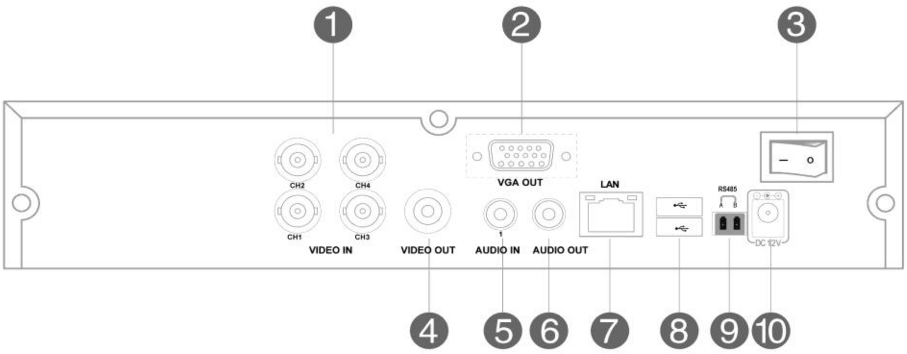
S/N	Function	S/N	Function
1	8 Channel Video Input	8	1 VGA Output
2	1 Channel Video Output	9	Power button
3	8 Channel Audio Input	10	1 Channel Audio Input
4	RJ45	11	USB OTG 2.0(Only for USB storage device)
5	2 Channel Alarm Output	12	8 Channel Alarm Output
6	RS485	13	DC 12V
7	GND		

16Ch. S rear panel：



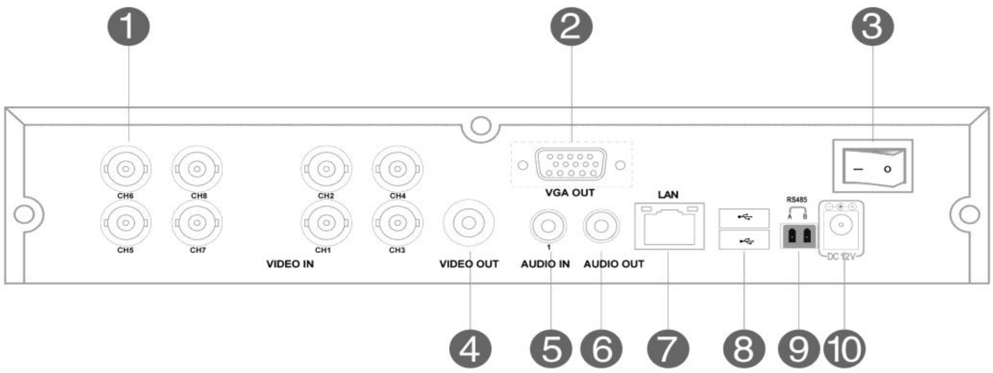
S/N	Function	S/N	Function
1	16 Channel Video Input	6	1 Channel Audio Input
2	1 VGA Output	7	1 Channel Audio Output
3	RJ45	8	USB OTG 2.0(Only for USB storage device)
4	Power button	9	DC 12V
5	1 Channel Video Output	12	1Channel Alarm Input/Output/ RS485

4Ch. S rear panel：



S/N	Function	S/N	Function
1	4 Channel Video Input	6	1 Channel audio Input
2	1 VGA Output	7	RJ45
3	Power button	8	2 USB OTG 2.0 (Only for USB storage device)
4	1 Channel Video Output	9	RS485
5	1 Channel Audio Output	10	DC 12V

8 Ch. S rear panel：



S/N	Function	S/N	Function
1	8 Channel Audio Input	6	1 Channel Audio output
2	1 VGA Output	7	RJ45
3	Power button	8	2 USB OTG 2.0 (Only for USB storage device)
4	1 Channel Video Output	9	RS485

5	1 Channel Audio Input	10	DC 12V

1.5U enclosure's front panel



S/N	Name	Icon	Function
1	Indicator light	**1-16ch**	Indicator Light ON: recording
		ALARM	Alarm
		STATUS	Fn light (If no Fn light on the front panel)
		Network	Net light
		HDD	HDD working
		PWR	power
2	Play/Pause	▶‖	Playback or paused mode, click this button to realize normal playback
			Iris+ Adjust iris +
			Num|Letter 6 mno
	Reverse/Pa	‖◀	In normal playback or pause mode, click this button to reverse In reverse playback, click this button to pause.
			Iris- Adjust iris-
			Num|Letter 5 jkl
	Fast play	▶▶	Various fast speeds and normal playback.
			Zoom+
			Num|Letter 4 ghi
	Slow Play	▶▸	Multiple slow play speeds or normal playback
			Zoom-
			Num|Letter 3 def
	Play Next	▶|	In playback mode, playback the next video
			Focus+
			Num|Letter 2 abc
	Play Previous	|◀	In playback mode, playback the previous video
			Focus-
			Num 1

	Shortcut Menu	Sub Menu	pops up shortcut menu Num|Letter 7 pqrs
	PTZ	**PTZ**	In PTZ function: enable PTZ Num|Letter 8 tuv
	Shift		Click this button to switch between numeral, English (Small/Capitalized), Chinese Num|Letter 9 wxyz
	Record	REC	Manually stop/start recording PTZ enter to the setting page. Num 0
3	Speed shuttle	Outside key	Same function as Right & Left key
		Inside key	Playing previous, fast/slow play function; Other situation: Same function as Up/Down key
4	Power		Power button, press for 3 seconds
5	Up/down		Activate current control, modify setup, Increase/decrease numeral, assistant function such as PTZ menu.
	Left/right		Shift current activated control When playback, click these buttons to control playback bar, PTZ control.
	Enter	 	Confirm operation Go to the main menu
6	ESC	ESC	Close upper interface or controls
	Mult	Mult	Preview switch video interface to one or more screen modes Switch HDMI,CVBS & VGA output by pressing Mult and Enter Switch resolution ratio by pressing Mult and Down key
	Assistant	Fn	Assistant function: PTZ control and image color. In PTZ menu, shift PTZ control menu.
	play	**Play**	In playback mode, playback the previous video
	shift	**Shift**	Switch between function and number
7	**10+**	 	Switch to channel 10+, press 10+ and last number
8	**USB**	**USB**	Front USB

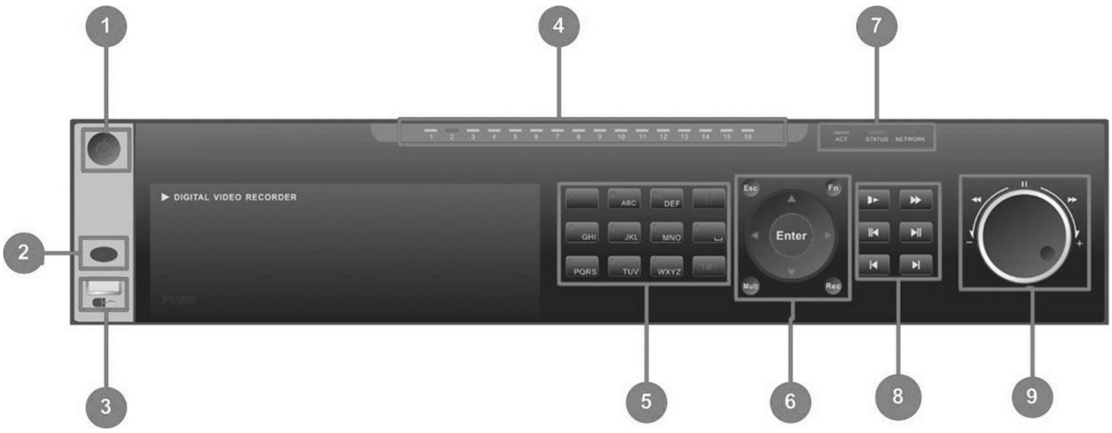
2U enclosure's front panel



S/N	Name	Icon	Function
1	Power		Power button, press for 3 seconds
2	Remote	IR	Receive remote control signal
3	USB	USB	Only support USB mouse
4	Indicator light	1-16ch	Indicator Light ON: recording
		ALARM	Alarm
		STATUS	Fn light (If no Fn light on the front panel)
		Network	Net light
		HDD	HDD working
		PWR	power
5	Number keys	Num	Input password, switch channel and input numeral
	Shift		Click this button to switch between numeral, English (Small/Capitalized),
	10+	10+	Switch to channel 10+, press 10+ and last number
	Play/Pause		Playback or paused mode, click this button to realize normal playback
			Iris+ Adjust iris +
	Reverse/Pa		In normal playback or pause mode, click this button to reverse
			Iris- Adjust iris-
	Fast play		Various fast speeds and normal playback.
			Zoom+
	Slow Play		Multiple slow play speeds or normal playback
			Zoom-
	Play Next		In playback mode, playback the next video
			Focus+
	Play Previous		In playback mode, playback the previous video
			Focus-
6	Assistant	Fn	Support Multi-function: Shift PTZ control manual, Delete the previous character, Realize special functions
	Up/down	▲ ▼	Activate current control, modify setup,
			Increase/decrease numeral, assistant function such as PTZ menu.
	Left/right	◀ ▶	Shift current activated control

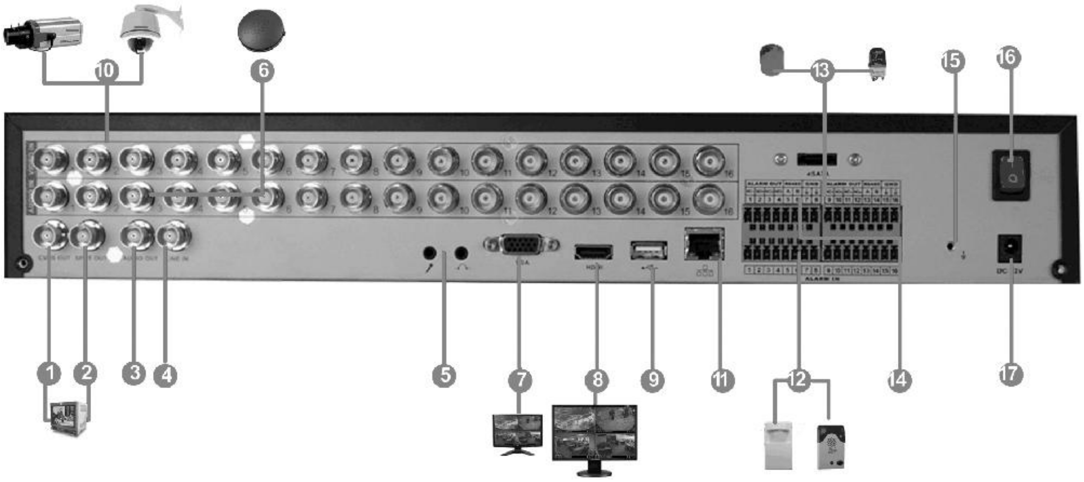
			When playback, click these buttons to control playback bar, PTZ control.
	Enter	Enter	Confirm operation
			Go to the main menu
	ESC	**ESC**	Close upper interface or controls
	Record	**Rec**	Record setup
	Mult	**Mult**	Preview switch video interface to one or more screen modes
			Switch HDMI,CVBS & VGA output by pressing Mult and Enter
			Switch resolution ratio by pressing Mult and Down key
7	**Speed shuttle**	**Outside key**	Same function as Right & Left key
		Inside key	Playing previous, fast/slow play function; Other situation: Same function as Up/Down key

90series Front & Rear Panel



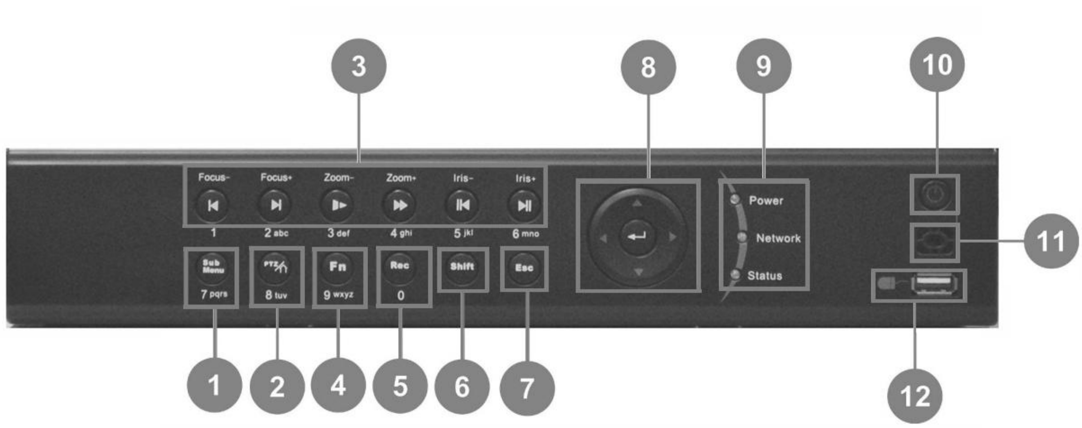
S/N	Name	Icon	Function
1	**Power**	⏻	Power button, press for 3 seconds to shut down DVR.
2	**Remote control**	**IR**	Receive remote control signal
3	**USB**	**USB**	Only support USB mouse
4	**indicator Light**	**1-16**	1-16 channel indicator Light
5	Numeral	**1-0**	Numeral | Letter | Character
	SHIFT	⇧	Switch between function and numeral
	10+	10+	Switch above 10+ channels
6	**Assistant**	**Fn**	Assistant function: PTZ control and image color. In PTZ menu, shift PTZ control menu.
	Up/down	▲ ▼	Activate current control, modify setup, increase/decrease numeral,
			Increase/decrease numeral, assistant function such as PTZ menu

	Left/right	▶ ◀	Shift current activated control. When playback, click these buttons to control play
			PTZ control
	Enter	Enter	Confirm current operation
			System menu in review window
	ESC	**ESC**	Close upper interface or controls.
	Rec	**Record**	Manually stop/start recording
	Mult	**Multi**	Multi display channels
7	**LED**	**ACT**	LED Indicators
		STATUS	When push any key, status indicator light will be on
		NETWORK	Network indicator light
8	**Play/Pause**	▶‖	Playback or paused mode, click this button to realize normal playback
			Iris+ Adjust iris
	Reverse/Pause	‖◀	In normal playback or pause mode, click this button to reverse
			Iris- Adjust iris
	Fast play	▶▶	Various fast speeds and normal playback.
			Zoom+
	Slow Play	▌▸	Multiple slow play speeds or normal playback
			Zoom-
	Play Next	▶▌	In playback mode, playback the next video
			Focus+
	Play Previous	▌◀	In playback mode, playback the previous video
			Focus-
9	**Jog Dial**	**Outer ring**	Left / Right
		Inter ring	Up / Down / Left / Right, and Fast play / Slow play



S/N	Function	S/N	Function
1	CVBS	10	16 channel video input
2	SPOT	11	RJ45
3	Audio Output	12	4 channel relay output
4	Audio Input	13	16channel alarm input
5	MIC Input / Output	14	RS-485
6	Line in	15	GND
7	VGA	16	Power
8	HDMI	17	DC12V
9	USB		

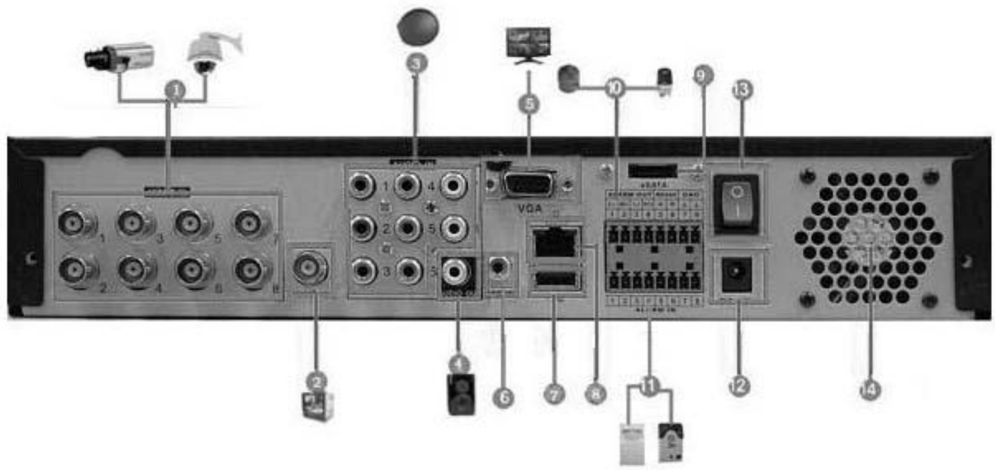
97series Front & Rear Panel



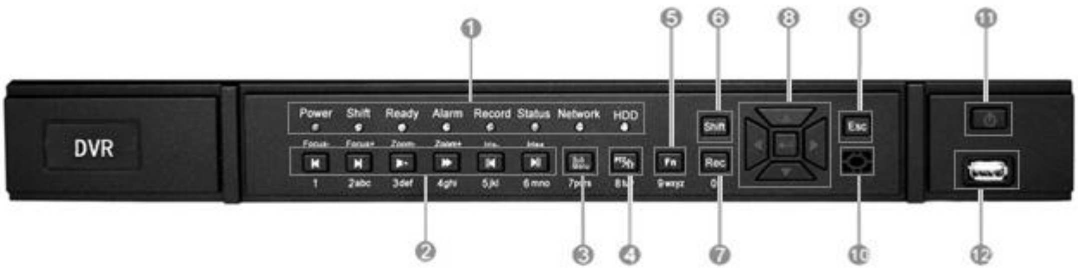
S/N	Name	Icon	Function
1	Sub Menu	Sub Menu	Right-click sub menu
			Numeral | Letter 7 pqrs

2	**PTZ**	**PTZ**	Assistant function, PTZ control
			Numeral | Letter 8 tuv
	Input		Switch between different input methods
3	**Play/Pause**		Playback or paused mode, click this button to realize
			Iris+ Adjust iris
			Numeral | Letter 6 mno
	Reverse/Pause		In normal playback or pause mode, click this button to reverse
			Zoom-
			Numeral | Letter 5 jkl
	Fast play		Various fast speeds and normal playback.
			Zoom+
			Numeral | Letter 4 ghi
	Slow Play		Multiple slow play speeds or normal playback
			Zoom-
			Numeral | Letter 3 def
	Play Next		In playback mode, playback the next video
			Focus+
			Numeral | Letter 2 abc
	Play Previous		In playback mode, playback the previous video
			Focus-
			Numeral 1
4	**Assistant**	**Fn**	Assistant function: PTZ control and image color. In PTZ menu, shift PTZ control menu.
			Numeral | Letter 9 wxyz
5	**Record**	**REC**	Manually stop/start recording
			Enter PTZ setting in PTZ setting
			Numeral Key 0
6	**Switch**	**Switch**	Switch between function and numeral
7	**Record**	**REC**	Manually stop/start recording
			Enter PTZ setting in PTZ setting
			Numeral Key 0
8	**Up/down**		Activate current control, modify setup, increase/decrease numeral,
			Increase/decrease numeral, assistant function such as PTZ menu
	Left/right		Shift current activated control. When playback, click these buttons to control playback
			PTZ control

	Enter		Confirm current operation
			System menu in review window
9	**Power indicator Light**	**Power**	Power indicator light
		Network	Network indicator light
		Status	When push any key, status indicator light will be on
10	**Power Button**		Power button, press for 4 seconds to shut down DVR.
11	**Remote control**	**IR**	Receive remote control signal
12	**USB Port**	**USB**	Only support USB mouse



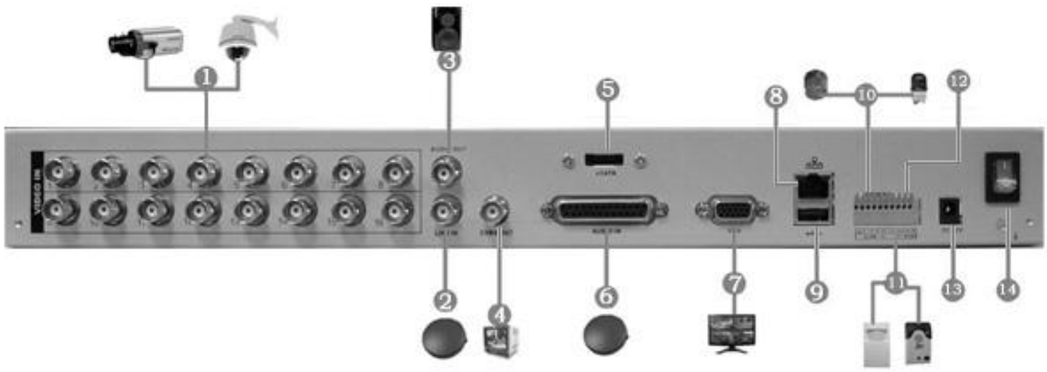
S/N	Function	S/N	Function
1	8 channel video input	8	RJ45
2	CVBS	9	Esata
3	8 channel Audio Input	10	8 channel alarm input
4	1 channel Audio Output	11	2 channel relay output
5	VGA	12	DC12V
6	Line in	13	Power
7	USB	14	Fan



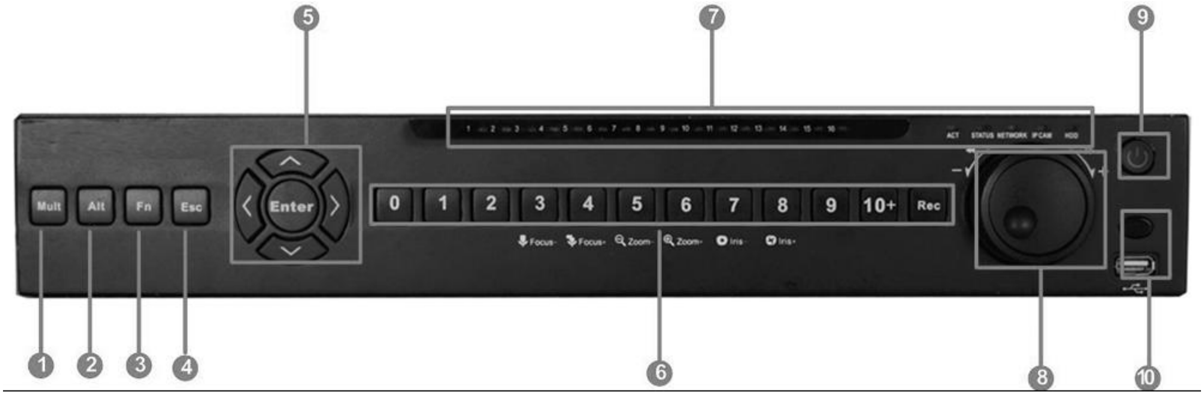
S/N	Name	Icon	Function
1	**Power indicator Light**	**Power**	Power indicator light

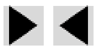
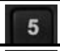
		Switch	Switch indicator light
		Ready	Ready indicator light
		Alarm	Alarm indicator light
		Record	Record indicator light
		Status	When push any key, status indicator light will be on
		Network	Network indicator light
		HDD	HDD indicator light
2	**Play/Pause**		Playback or paused mode, click this button to realize normal playback
			Iris+ Adjust iris
			Numeral | Letter 6 mno
	Reverse/Pause		In normal playback or pause mode, click this button to reverse In reverse playback, click this button to pause.
			Zoom-
			Numeral | Letter 5 jkl
	Fast play		Various fast speeds and normal playback.
			Zoom+
			Numeral | Letter 4 ghi
	Slow Play		Multiple slow play speeds or normal playback
			Zoom-
			Numeral | Letter 3 def
	Play Next		In playback mode, playback the next video
			Focus+
			Numeral | Letter 2 abc
	Play Previous		In playback mode, playback the previous video
			Focus-
			Numeral 1
3	**Sub Menu**	**Sub Menu**	Right-click sub menu
			Numeral | Letter 7 pqrs
4	**PTZ**	**PTZ**	Assistant function, PTZ control
			Numeral | Letter 8 tuv
	Input		Switch between different input methods
5	**Assistant**	**Fn**	Assistant function: PTZ control and image color. In PTZ menu, shift PTZ control menu.
			Numeral | Letter 9 wxyz
6	**Switch**	**Switch**	Switch between function and numeral

7	**Record**	**REC**	Manually stop/start recording
			Enter PTZ setting in PTZ setting
			Numeral Key 0
8	**Up/down**	▲ ▼	Activate current control, modify setup, increase/decrease numeral, assistant function such as PTZ menu
			Increase/decrease numeral, assistant function such as PTZ menu
	Left/right	▶ ◀	Shift current activated control. When playback, click these buttons to control play bar.
			PTZ control
	Enter	↵	Confirm current operation
			System menu in review window
9	**ESC**	**ESC**	Close upper interface or controls.
10	**Remote control signal**	**IR**	Receive remote control signal
11	**Power Button**	⏻	Power button, press for 4 seconds to shut down DVR.
12	**USB Port**	**USB**	Only support USB mouse

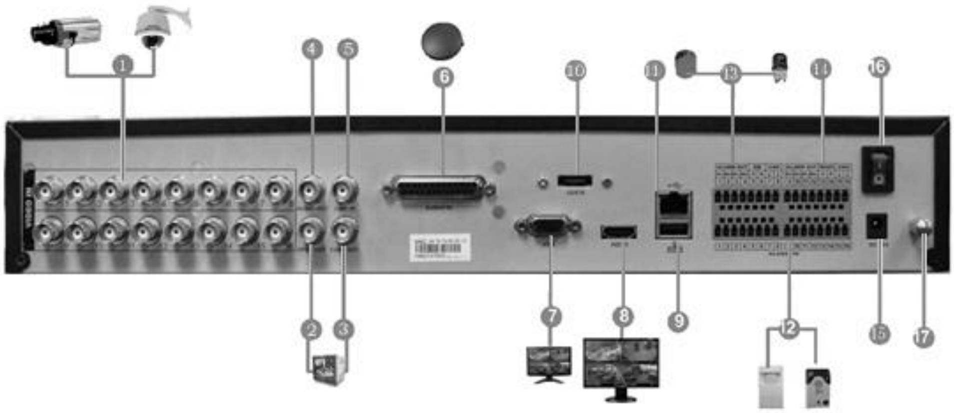


S/N	**Function**	**S/N**	**Function**
1	16 channel video input	8	RJ45
2	Line in	9	USB
3	Audio Output	10	4 channel alarm input
4	CVBS	11	1 channel relay output
5	Esata	12	RS-485
6	8 channel Audio Input	13	DC12V
7	VGA	14	Power



S/N	Name	Icon	Function
1	**Mult**	**Mult**	Switch the display window
2	**Alt**	**Alt**	HDMI Output、CVBS Output、VGA Output
3	**Assistant**	**Fn**	Assistant function: PTZ control and image color. In PTZ menu, shift PTZ control menu.
4	**ESC**	**Esc**	Close upper interface or controls.
8	**Up/down**		Activate current control, modify setup, increase/decrease numeral, assistant function such as PTZ menu
			Increase/decrease numeral, assistant function such as PTZ menu
	Left/right		Shift current activated control. When playback, click these buttons to c playback bar.
			PTZ control
	Enter		Confirm current operation
			System menu in review window
6	Numeral	**0 ～ 9**	Numeral | Letter | Character
	10+		Switch above 10+ channels
	Rec	**Record**	Manually stop/start recording
	Focus-		Focus-
	Focus+		Focus+
	Zoom-		Zoom-
	Zoom+		Zoom+
	Iris-		Iris-
	Iris+		Iris+
7	Indicator light	**Power**	Power indicator light
		ACT	Remote indicator light
		STATUS	When push any key, status indicator light will be on
		NETWORK	Network indicator light
		IP CAM	IP Camera indicator light
		HDD	HDD indicator light

8	**Jog Dial**	**Outer ring**	Left / Right
		Inter ring	Up / Down / Left / Right, and Fast play / Slow play
9	**Power**	⏻	Power button, press for 3 seconds to shut down DVR.
10	**Remote control**	**IR**	Receive remote control signal
	USB	**USB**	Only support USB mouse



S/N	Function	S/N	Function
1	video input	**10**	Esata
2	CVBS	**11**	RJ45
3	SPOT	**12**	16channel alarm input
4	Audio Output	**13**	4 channel relay output
5	Line in	**14**	RS-485
6	Audio Input	**15**	DC12V
7	VGA	**16**	Power
8	HDMI	**17**	GND
9	USB		